FEEDSTUFFS

★ A WEEKLY NEWSPAPER ★

FOR THE FEED MANUFACTURER, JOBBER, BROKER and DEALER

Volume 30—Number 16 APRIL 19, 1958 1 Year $4, 2 Years $7

Hatchery Output Of Turkey Poults Continues to Lag

WASHINGTON — Hatchery production of turkey poults is lagging, and it appears that turkey production this year won't come up to earlier expectations.

The early hatch of heavy breed poults is down significantly from 1957, and another marked decline is indicated for April.

The U.S. Department of Agriculture, in its latest hatchery report, said that output of heavy white breed turkey poults in March was 1,322,000 —down 19% from a year earlier. Production of other heavy breed poults totaled 9,247,000, representing a decrease of 11%.

Output of light breed poults in March, however, was up 2%, totaling about 1.1 million birds.

For the first three months of the year, production of heavy breed poults was off a sharp 17% from 1957. The hatch of light breed poults was down 1%.

Looking at April, USDA noted that the number of heavy breed eggs in incubators on April 1 was down 16% from a year ago, indicating another marked decrease in heavy breed poult output this month.

The number of light breed eggs in incubators on April 1 was down 3%.

These reports on hatchery production of poults show trends different from growers' previously expressed intentions. They reported earlier plans to increase heavy breed turkey production this year and cut back raising of light breeds, with the total winding up about the same as the big 1957 turkey crop, which brought low prices.

Increased Marketings Cause Broiler Price Leveling in Delmarva

SALISBURY, MD.—Broiler prices in Delmarva have fallen to about the same level of a year ago after several weeks at a higher plateau. The average price paid on the farm in Delmarva last week was 19.29¢ lb., according to the Maryland-Delaware crop reporting service. The previous week's price was 20.64¢ and a year ago it was 19.13¢ lb.

A 17% increase in the number of broilers sent to market by Delmarva growers last week over the week before was seen as a likely reason for the dip in prices. The 3,381,000 birds

(Turn to **BROILERS**, page 97)

Egg-Type Chick Output Now Showing Only Moderate Gain

WASHINGTON — Production of egg-type chicks is not showing much increase over a year earlier.

Commercial hatcheries' March output of chicks for laying flock replacement was up 5% from the same month in 1957, but the number of eggs in incubators on April 1 was only 2% larger than a year ago.

Thus, the total potential market for chick starting and growing feeds this season may be somewhat smaller than some persons had thought earlier.

Possibly the increase will be somewhat in line with farmers' February plans to buy 6% more baby chicks this year than in 1957.

Also, it may be noted, an increase of these proportions would not affect total laying flock size enough in 1958-59 to have much effect on egg prices. That is, economists expect prices in the coming year to be about equal to year-earlier levels if the increase in flock replacement birds is not more than about 5%.

The U.S. Department of Agriculture reported that chicks hatched for flock replacement during March totaled 114.6 million, or 5% more than a year earlier.

For the first three months of the year, production of egg-type chicks totaled 210.9 million birds. This represents an increase of 8% over a year ago.

However, the number of flock replacement eggs in incubators on April 1 was only 2% larger than a year ago, indicating not much increase in the size of the hatch in the important month of April.

Some persons have noted a continuing decline in small farm flocks, which may be one factor in the absence of a sharper increase in the demand this year for egg-type chicks.

Meanwhile, USDA reported that the number of broiler chicks hatched during March was 150 million, up 8% from a year earlier. For the first three months of the year, output of broiler chicks was 9% ahead of 1957.

USDA pointed out that demand for broiler chicks was continuing strong, and the number of broiler eggs in incubators on April 1 was 15% larger than a year earlier.

USDA Reports 12% Increase In Cattle on Feed April 1

WASHINGTON — The number of cattle and calves on feed for market in 13 major feeding states on April 1 stood 12% above the figure of a year ago this month. Furthermore, the total of 4,896,000 head was only 2% fewer than on Jan. 1 this year, compared with a normal drop of 15% between Jan. 1 and April 1 the last two years, according to the U.S. Department of Agriculture.

This large number of cattle on feed was expected, due to the wet corn situation and a large feed supply in general. The 13 major feeding states involved in the report are Ohio, Indiana, Illinois, Minnesota, Iowa, Missouri, South Dakota, Nebraska, Kansas, Texas, Colorado, Arizona and California.

The nine Corn Belt states had 13% more cattle and calves on feed as of April 1, than a year ago. Contributing to the 4,124,000 total were Iowa, the leading cattle feeding state, with an increase of 11%, Illinois up 3%, Minnesota up 12%, Missouri up 21%, South Dakota up 35%, Nebraska up 27% and Kansas up 75%. On the other hand, Ohio's numbers were down 2% and Indiana's 10%.

Also directly involved in the April 1 figures was the 32% increase in shipments of stocker and feeder cattle into nine of the Corn Belt states for the January through March quarter of 1958, over the same period of 1957.

Iowa had a major part in the cattle feeding picture, registering a new peak for April 1, by putting 20% more on feed in the first quarter of this year than in any of the last five years. Iowa feeders had 1,404,000 head in feed lots. This represented nearly 29% of the 13-state total of 4,896,000 head.

For the five important western feeding states—Texas, Idaho, Colorado, Arizona and California—cattle numbers on feed April 1 this year were 882,000 head, up 6% from the date a year ago. While California, the leading western feeding state,

(Turn to **CATTLE**, page 97)

Action on Farm Legislative Front Reported at Standstill

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — Farm law-making processes here are about at a standstill. Here are the highlights:

The extension of the wool bill is now held as a hostage by delays in the House Agriculture Committee in a vain effort to force out other measures which administration supporters will not accept.

Also tied up in the legislative blockade is House action on extension of Public Law 480, surplus disposal measure, which has already passed the Senate.

House hearings have not even been held on this bill, although the Senate has already passed it.

The delay thus far on this measure is now said to mean that its authorization of another 500 million dollars for this fiscal year to finance PL 480 commodity surplus exports is dead and that this additional authorization will not carry over into the next fiscal year.

Some think that final passage of the PL 480 extension may go over until July 3.

A Senate Agriculture Committee executive session this week found the committee disinclined to go along

(Turn to **LEGISLATION**, page 97)

FEEDSTUFFS *Features This Week*

NUTRITION: Recent developments in mineral nutrition are reviewed on **page 38**. Data on amino acid needs of swine appear on **page 88**.

FINANCING: The present and future of feed financing are discussed on **page 82**.

NEW MILL: A new Washington feed mill operated by two men is described on **page 46**.

CAGE HOUSE: Birds are individually fed in a special cage house designed for feeding research. See **page 14**.

INTEGRATION: On **page 74**, economists answer questions on the development of integration.

— REGULAR FEATURES —

Convention Calendar	18	Putting Research to Work	80
Joe Brooks	26	Up or Down	86
Worth Looking Into	78	Feed Markets in Detail	98

Pure Fat in Itself Said Not Implicated In Poultry Disease

CHICAGO — Recent research supports the previous conclusion that pure fat in itself is not implicated in the poultry disease condition which last fall hit many flocks in the Southeast and other sections.

This was noted in a special report issued this week by the American Meat Institute Foundation, which has been among those conducting research on the cause of the disease.

AMIF scientists said that apparently no one has yet obtained the final answer to the problem, which appeared to be related to the presence, in some feeds, of certain toxic fatty materials. While AMIF and other results have thus far not been conclusive, significant new knowledge has been obtained, it was pointed out.

"Whatever the source of the toxic factor," the report said, "it does appear to be concentrated in the unsaponifiable fractions of those samples of fat that caused trouble. Fractionation of the unsaponifiable matter from these fats has revealed the pres-

(Turn to **DISEASE**, page 101)

FEEDSTUFFS

A Weekly Newspaper Published by
THE MILLER PUBLISHING CO.
2501 WAYZATA BLVD., MINNEAPOLIS, MINN.
(Address Mail to P. O. Box 67, Minneapolis 40, Minn.
(Telephone: FRanklin 4-5200. All Offices Serviced by Bell System Teletype)

EDITORIAL STAFF—George L. Gates, Editor; Roger Berglund, Managing Editor; John Cipperly, Washington Correspondent; Emmet J. Hoffman, Merchandising Editor; John S. Franklin, James E. Sharon and James H. Ross, Editorial Assistants; Duane F. McKenzie, Research Director.

WASHINGTON CORRESPONDENT—John Cipperly, 604 Hibbs Building, Washington, D. C., Telephone, Republic 7-8534.

ADVERTISING STAFF—Wilfred E. Lingren, Advertising Director; Carl R. Vetter, Advertising Department Manager; Bruce A. Kirkpatrick, Advertising Production Manager; Leland C. Hubert, Assistant Advertising Production Manager; R. Dale Swenson, Promotion Manager.

BUSINESS STAFF—Martin E. Newell, Chairman of the Board of Directors; Milton B. Kihlstrum, President and Treasurer; Wilfred E. Lingren, Executive Vice President; Don E. Rogers, Vice President; Paul L. Dittemore, Vice President; Donald G. Neth, Secretary; Edwin J. Hartwick, Circulation Manager; James G. Pattridge, Assistant Treasurer; Richard L. Ostlund, Office Manager; Walter O. Buchkosky, Production Superintendent.

BRANCH OFFICES—SOUTHWEST, Martin E. Newell, Manager; Thomas E. Letch, Assistant Manager, 612 Board of Trade Bldg., 1005 Wyandotte St., Kansas City 5, Mo. (Tel. Victor 2-1350); EASTERN STATES, Paul L. Dittemore, Manager; George W. Potts and James W. Miller, Advertising Sales Representatives, Suite 3214, 551 Fifth Ave., New York 17, N. Y. (Tel. Murray Hill 2-2185); CENTRAL STATES, Don E. Rogers, Manager; Henry S. French, Assistant Manager, 2832 Board of Trade Bldg., 141 W. Jackson Blvd., Chicago 4, Ill. (Tel. Harrison 7-6782); NORTHWEST, Paul A. Anderson, Advertising Sales Representative, P. O. Box 67, Minneapolis 40, Minn. (Tel. Franklin 4-5200).

Correspondence regarding subscriptions, changes of address, etc., should be sent to Circulation Manager, Feedstuffs, Box 67, Minneapolis 40, Minn. Single copies 20¢. Subscription rates: One year $4, two years $7, in the U.S., U.S. possessions, Canada and Pan-America. Add $3 a year for postage to other countries. Readers are urged to give prompt notice of change of address and to anticipate future changes by at least two weeks' advance notice. Ask postman for form 22-8. Feedstuffs accepts subscriptions only through its own offices; no subscription solicitors are employed or recognized. Associated publications: The Northwestern Miller, The American Baker, Milling Production, Croplife, Farm Store Merchandising.

Entered as second-class matter Feb. 25, 1947, at the post office at Minneapolis, Minn., under the Act of Mar. 3, 1879

The regional circulation of this issue is concentrated in the northeastern states

A Source of Strength

HOW is the agricultural economy doing? This is a question that is uppermost in the minds of those whose business is tied in closely with the interests of agriculture, and it deserves an honest answer. As pointed out several weeks ago by this publication, it often appears that not enough attention is paid to the relative prosperity of this segment of the over-all economy in these times of general concern with the business recession.

A statement issued this week by Secretary of Agriculture Benson covers the highlights of the present agricultural situation, and insofar as bare statistics can tell a story, this summary certainly tells a heartening story. Here are some excerpts from the Secretary's statement:

With prices received by farmers running substantially higher than a year ago, realized net income of farm operators in the first quarter of this year may be fairly close to a rate of $13 billion, compared with a rate of $11.7 billion in the same quarter of 1957. For the remainder of 1958, a gain in farm income over last year is also indicated, although as supplies of some commodities increase, the levels of prices may not be maintained as high as they are now. Further, farmers will receive more income for participation in the Soil Bank this year than last.

In recent months there has been a substantial improvement in the price and income picture. The latest price report of the U.S. Department of Agriculture shows that prices received by farmers averaged 4% higher in mid-March than in mid-February and 11% higher than in March of 1957. Farm prices are now at the highest level in almost five years and in March were 9% above the level of June, 1955, when high, rigid price supports were last generally in effect. Based on the movement of prices of farm commodities in central markets, this higher level of farm prices has been maintained in early April. Even with prices paid by farmers at a record high in March, the parity ratio rose to 87, compared with 81 a year earlier.

Generally, the most substantial improvements in prices were made by commodities which are free of government price support programs. The price to farmers for beef cattle in mid-March was up 36% over a year earlier. Hog prices were 21% higher and eggs 33% higher.

Agriculture has been a source of strength in the current recession. The decline in employment has not significantly affected the demand for food. Sales at retail food stores in the first quarter were some 8 or 9% above a year earlier. Apparently, some small increases or decreases in the total level of consumer income do not affect the demand for food significantly. The main impact of the recession on agriculture has been to restrict very substantially the job opportunities available to farm people. About one third of the income received by farm people is obtained from nonfarm jobs and other nonfarm sources.

★ ★ ★

SOME of the above statements can be recognized as polite reiteration of Mr. Benson's convictions regarding flexible price supports, which is understandable in view of the continuing political row about price support levels. However, one need not necessarily consider this issue in recognizing that the facts about farm income are significant and distinctly refreshing. And, while one cannot conclude from average figures that for everyone, everywhere, things are rosy, there is no doubt that the healthy glow of total farm income figures can help improve business well-being in general.

As Mr. Benson says, agriculture has been a source of strength in the recession and, with confidence and sincere effort, it can continue to provide that strength.

★ ★ ★

Memo to Kansans

THE Kansas State Legislature will convene April 21 in a special session. This will provide another opportunity for an appropriation of funds needed to replace milling department facilities lost in a fire last August at Kansas State College. The legislature earlier this year appropriated some $1.1 million to rebuild the portion of Waters Hall destroyed by fire, but the measure received a pocket veto by the governor. Besides a pilot flour mill, the building contained laboratories, classrooms and other facilities needed for feed technology courses at the college. The college feed plant itself was not damaged seriously.

Now, with another legislative session, it will be possible to appropriate funds, over a veto if necessary, to put the college milling industries departments back in business on a normal basis. Feed and grain men in Kansas would be doing themselves and the entire feed industry a service if they would contact their representatives and urge passage of legislation which would provide rebuilding funds. The industry has contributed greatly in providing a pilot feed mill at the college. However, its investment in the important feed technology program is greatly diminished in value without the needed facilities lost in the fire. Feed men outside of Kansas can help, too, by reminding their Kansas friends of the importance of the legislature's action.

A FEEDSTUFFS FORMULA FEEDS: HOW'S BUSINESS? FEATURE

Good prices for livestock and livestock products held demand for formula feeds at a fairly strong level over the nation during the past week. Some pick-up in demand was noted in areas that have had spotty demand through the winter and spring. Ingredient prices moved up during the week to cause another price increase for formula feeds and a slightly lower feeding ratio. Some concern was expressed over the increasing prices. The feedstuff price index rose to 86.8 compared with 84.3 the previous week and 80.2 the same week a year earlier. The feed grain index advanced to 71.1 as against 68.4 the week before and 74.7 a year ago. On the other hand, the hog-corn ratio, based on Chicago prices for the week ended April 12, slipped to 16.6. This compared with 17.6 a week earlier and 14.0 the same week a year earlier. (Feed ingredient price details on pages 100-102.)

Northwest

Demand for formula feed continued at a generally strong level during the past week to indicate that April may also set some records after a month of March that set records or near records for some firms.

Formula feed representatives indicated that most mills are running at normal capacity and beyond. Some were reporting Saturday as well as extended shifts.

Pig starters and hog feeds generally held their position as the big sales getters. Cattle feeds continued relatively strong.

Turkey and chick starters were moving well, according to some reports, but other representatives indicated that lower interest in farm flocks and fewer turkeys on feed in their areas left demand for these feeds somewhat spotty.

Seasonal demand for poultry rations brought heavier demand for middlings, and they showed a price increase. Corn was also up along with a rise in soybean oil meal. Meat scraps were off slightly, however, and the result was a price increase for the coming week that ranged from about unchanged to up slightly for concentrates and increases running up to around $2 for complete feeds.

Although some representatives expressed concern over the possibility of resistance to the steadily rising prices, others felt the strong prices for livestock products would keep demand at a high level.

Some major ingredient prices, according to the Minneapolis grain division office of the U.S. Department of Agriculture, were near the 1952-56 average for the week. Bran and middlings April 15 were 98% and 101% of the average, respectively. Soybean meal was 101%, linseed meal 93%, 60% tankage 132% and 50% meat scraps 128%.

Southwest

Continued good business was enjoyed by most formula feed manufacturers this week, although there were a few signs that volume was topping off. Mill running time ranged from five to six days, an average of two shifts. However, several mills reported that backlogs were not what they were. Others noted that they were busier than in the previous week.

Chick starter feed was moving in an increasing volume. Birds were being put down at a more rapid pace now that the weather has become more spring-like over the area. Carlot orders for chick starter feeds have been received from some areas for the first time this season. Turkey feed was not yet moving in any substantial volume, but broiler rations were in good demand, and laying formulas were continuing at a steady pace.

Hog feeds were still moving fast. There was a slowing trend in dairy feed business as pastures greened up throughout the area. Steer feeds were meeting good demand, with more cattle on feed than a year ago.

Higher prices kept buyers from doing more than hand-to-mouth purchasing. But dealers did not dare let their inventories get too low because of good consumer demand. This hesitancy to build up stocks, no doubt, reflected hope that future bookings may be made at prices below those prevailing.

Price lists for next week were expected to be unchanged to up 50¢ ton. Millfeeds were up sharply, but grains were off and advances on other ingredients were not large. Some mills were reluctant to move prices up this week, even though costs indicated that course, because they felt there was a likelihood a weaker tone will dominate next week.

Northeast

Consumers were kicking about high prices—but they were buying—and formula feed manufacturers enjoyed as good a volume last week as they have had all spring.

Dairy feeds hung on very well. Several weeks ago ideal weather caused an orderly runoff of winter snow, followed by a cold spell. Warm, sunny days returned and pastures were expected to be firm enough for cattle to graze when the grass is ready. Farmers were considered likely to put their cattle out a little earlier this year to escape the high feed prices.

Egg mashes were the sales leaders during the week, followed by dairy feeds, broiler, chick starter and some turkey feeds.

Broiler prices in the East were about steady, with levels a little be-

(Turn to MARKETS, page 102)

TO PUT PROFITS IN YOUR POCKET*

put SUCRO-FLAVOR in your feeds

because SUCRO-FLAVOR saves you over $5.00 per cwt. of sugar replaced

- Get better sweetening than sugar, at ¼ the cost! No objectionable aftertaste such as is common with ordinary Saccharin.
- Get flavor and aroma that lasts and lasts, and keeps on attracting!
- Get powerful antioxidant action that prevents off-odors caused by rancidity and helps protect vital feed nutrients!
- Get them all with the one profit-boosting, single additive—SUCRO-FLAVOR.

* and your customers' pockets, too

56,000,000 baby pigs will eat $17,000,000 worth of high-sweet creep feeds this spring.

Capitalize on this market with the finest. Save over $15 a ton on your creep feeds by sending this coupon in today!

FLAVOR CORPORATION OF AMERICA

3037 N. CLARK STREET • CHICAGO 14, ILLINOIS

Please send me:

- ☐ A Free Sample of SUCRO-FLAVOR
- ☐ A 5 Lb. Trial Order at the 100 Lb. Price Schedule
- ☐ Prices and Complete Information

Name_____

Address_____

City_____ State_____

POULTRY PRINCESS—One of the newest, and probably prettiest, representatives of the North Carolina poultry industry is Blanche Hodges Manning, left, recently crowned "Miss North Carolina Poultry Princess" in finals of statewide competition at Winston-Salem. She is a 19-year-old Duke University student from Williamston. Doing the crowning is Elaine Herndon, Durham, Miss North Carolina.

Poultrymen Discuss Integration and Co-ops at New Hampshire Meeting

DURHAM, N. C.—A plan referred to as "quasi-integration" was described by Prof. S. K. Seaver, University of Connecticut, at the spring meeting of the New Hampshire Poultry Growers Assn., University of New Hampshire.

The plan is said to give the poultryman the benefits of integration without the problems generally associated with it.

A major part of the meeting dealt with the general subject of integration, including a panel session on "How to Stay Independent in an Integrated Poultry World," and an address on "The Need for Bigger Co-ops."

Prof. Seaver said that with the quasi-integration plan—it is being practiced in Connecticut—a group of 10 or so good broiler growers bands together and take the output from a hatchery the year around. They contract their feed, and make an agreement with a processor to handle their birds.

He said the results are (1) cheaper chicks because the hatchery has no selling costs and can operate more efficiently, (2) cheaper feed because the feed company has no problem of selling, or uneven supply, and (3) better broiler prices by 1.2¢ lb. because the processor has a uniform supply and can operate efficiently and still pay more to the independent poultrymen who can collectively make their own decisions.

"This same type of program is working for egg producers and must be used more in the future or there will be complete integration in this field, too," Prof. Seaver asserted.

"We must increase the size of egg handling firms and reduce the number of such firms to cut costs. This will result in lower marketing costs. Also, producers must supply the markets with a uniform supply. This can be done by quasi-integration."

Staying Independent

Panel speakers provided several answers to the problem, "How to Stay Independent in an Integrated Poultry World." Among them were (1) reduce prices paid by as much as 30%, (2) get as much as 10¢ doz. more for eggs, (3) get 2¢ lb. more for poultry meat, and (4) for hatching egg producers with meat type birds, get 185 eggs per pullet housed.

Joseph Archambault, a market egg producer from Hollis, told how in the past 12 years he built his farm operation up from practically nothing to a flock of 10,000 layers.

He uses bulk feed, has a cooler for his eggs and gathers them three times a day. He mentioned that he has to pick up eggs from some of the favorite nests as often as six times a day.

Mr. Archambault said poultrymen must work together in the future much more closely than they have in the past. He advocated a poultry association of New England for market egg producers that would give these markets a continuous uniform supply of high quality eggs that could be sold under a New England brand label.

He told how he has been getting together with his neighbors to do joint buying and selling. "Some have saved as much as 30% on purchases by pooling their orders. They cull their flocks at the same time and give the poultry buyers a full load," the egg producer explained. "In some cases they have made 2¢ lb. more because of this."

Clifford Eastman, market egg producer from Laconia, bought out a farm that kept 3,500 layers where he worked as a hired man and then expanded it into a 10,000-bird operation.

The labor-saving setup he described included bulk feed handling, mechanical feeders, range feeding equipment, an electric photo cell to control lighting, refrigerated egg room and a centrally-heated brooder house.

He sells his eggs mostly to stores, restaurants and hotels in the area, but retails some eggs and eviscerated frozen fowl at the farm.

He said he found that the other producers selling in the area were getting various prices—"frequently one was trying to under sell another"—so he got them together and they established an informal pricing system for candled cartoned eggs sold to stores.

"Six of the seven producers in-

(Turn to POULTRYMEN, page 101)

Capital Comment

By John Cipperly

WASHINGTON—Commodity Stabilization Service activities in drafting a regulation to implement the President's directive to USDA to put into effect a subsidy-in-kind program for cotton and feed grains disclose some internal problems affecting Commodity Credit Corp. These problems were first disclosed at the meeting of regional office officials of CCC at New Orleans last week.

These developments indicate that the freeze of top quality stocks of CCC corn will be much tighter than had originally been expected, unless at some later date arrangements can be worked out between the grain trade committee and CSS officials.

At the Louisiana session, the regional office directors of CCC were informed that in acutely congested grain storage areas where top quality corn stocks must be moved from bin sites or country stations to make way for new crop harvests, CCC will be unable to move those stocks for storage in other areas unless the going price in the new storage area is equal to the statutory formula resale price, plus the freight charges accumulated in such a movement—the movement, it was stated, would have to be in the direction of export positions.

This condition is imposed on CCC by the General Accounting Office,

Senate sources this week told this reporter that USDA officials' apprehension over the House debate on the USDA appropriations bill, which contained a House sub-committee report highly critical of the subsidy-in-kind program for feed grains and cottons, can be dismissed. It was said that when the conference committee on the appropriations bill meets after Senate passage, the Senate chairman will inform the House group that inclusion of the sub-committee report during the House debate on the measure does not constitute the will of the Senate and does not constitute legislative history. Once that background is established, it may be expected that USDA will proceed without delay in implementing its planned subsidy-in-kind regulations. The House appropriations sub-committee has insisted that USDA must maintain a dual program—on sales of surpluses under competitive bids by exporters, the policy followed for the past year, and the subsidy-in-kind plan. The sub-committee opposition was aimed primarily at the cotton subsidy-in-kind operation, but it was feared at USDA that this same objection would apply to feed grains.

which has warned CCC officials not to add on any new cost factors to CCC supplies of surplus stocks purely for the sake of changing storage positions.

Would Buy More Bins

The alternative to this warning if no suitable storage can be found to cover those conditions would be for CCC to buy additional bins for the congested storage area. GAO favors purchase of additional storage bins since a cost study run by the big accounting agency of Congress is said to reveal that storage costs in bin sites are only 6¢ per bushel per year as compared with a 16¢ charge in permanent storage facilities.

USDA officials explain, however, that this represents a gross difference in storage costs and does not reflect the greater rate of damage losses or deterioration in steel bin sites of the government nor the compensation to the government in taxes paid by warehousemen. However, it is also noted that bin site storage of grains in some instances represents questionable quality of grain which the government, under a liberal attitude to farm producers, must take when making loans to producers, whereas the private warehouseman can be more discriminating and can refuse grains which do not represent good keeping qualities.

It was learned from members of the grain trade committee which met here with USDA officials on the subsidy-in-kind program that in this matter of movement of CCC stocks of corn held in acutely congested storage areas, to the extent possible in disposing of such distress stocks of top quality CCC corn, offers might be made to the private trade daily upon acceptance of subsidy bids on some part of these stocks on some basis related to the price approved to successful bidders for the subsidy on that day. This topic was not extensively discussed at the formal sessions at that time.

In connection with the disposal or movement of CCC stocks of grains under the subsidy-in-kind regulation, it is known that the CCC advisory committee gave its approval to that program only with the understanding that CCC must make certain reservations in the program which will give it necessary latitude in disposing of or moving stocks of high quality corn when it is seen necessary by CCC officials even if a subsidy-in-kind program is operative.

Out-of-condition corn stocks which become available for market would be covered in the general regulation along the lines proposed by the grain trade committee, it is said.

Memphis Club Will Meet April 22

MEMPHIS—Graham Dudley of the Langston Bag Co., and Bruce Ballew, Farmers Milling & Elevator Co., have been nominated for president of the Memphis Feed and Grain Club during 1958.

The election will be held during a dinner starting at 7:15 p.m. Tuesday, April 22, at the Cecac Club atop the Memphis Cotton Exchange Building.

Harold Sullivan of Sullivan Sales Co. is the retiring president.

Mr. Dudley heads the gold ticket, which also includes these candidates: E. C. McGee of Swift & Co. Oil Mill, vice president; Hal A. Davis II, Cargill, Inc., secretary; Thomas M. Marlow, McMillen Feed Mills, treasurer; Arthur A. Williams, executive vice president of the Memphis Board of Trade, Harry Tobias of Goldenrod Oil Meal Sales Co., Jack Harpster of Standard Commission Co., and Daniel J. Paul of Buckeye Cellulose Corp., directors.

With Mr. Ballew on the blue ticket are these candidates: James R. Spicola, Cargill, Inc., vice president; James L. Garrigan, Quaker Oats Co., secretary; George W. Cole, Buckeye Cellulose Corp., treasurer; Wells Hanley of Sullivan Sales Co., David Rucker of National Alfalfa Dehydrating & Milling Co., Giles A. Coors, Jr., of Fred Lovitt & Co., and George R. Newell of Allied Mills, Inc., directors.

MANEY BROS. MILL & ELEV. CO.
Minneapolis, Minnesota
Distributors in the Upper Midwest States for
SMALL'S DEHYDRATED ALFALFA MEAL

CREATIVE CUSTOMER SERVICE
another Dynamic DYNAFOS *plus factor*

Aggressive research

100% availability

Superior technical service

They're not on the label...

but these "ingredients" make

DYNAFOS® *dynamic too*

IT'S the total combination of ingredients that makes DYNAFOS today's most *dynamic* feed phosphate. Consider these facts: Each year International conducts more phosphorus research than the rest of the industry combined. Unequalled facilities produce Dynamic DYNAFOS in unique beaded form . . . a product that consistently rates 100% available. Industry-wide technical service keeps you posted on latest developments in phosphorus research. You benefit, too, from a proved, dependable source. And unlimited resources are further assurance that International will continue to provide you with the best in feed phosphorus products.

Write or wire your nearest sales agent for full information.

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

MINERALS International CHEMICALS

PHOSPHATE CHEMICALS DIVISION . . . . . 20 N. WACKER DRIVE, CHICAGO 6, ILL.

Sales Agents: **EASTERN AREA:** GRANDONE, INC., Needham (Mass.) • SUNSET FEED & GRAIN CO., INC., Buffalo • P. R. MARKLEY, INC., Philadelphia • A. G. GREENE COMPANY, Charlotte (N. Carolina) • EDWARD E. SMITH COMPANY, Atlanta • E. A. CARTER BROKERAGE COMPANY, Tampa **CENTRAL AREA:** BULLARD FEED COMPANY, Chicago • GOOD LIFE CHEMICALS, INC., Effingham (Ill.) • JOHN F. YOUNG COMPANY, Cincinnati • R. D. ERWIN COMPANY, Nashville • CHAS. F. WILLEN CO., INC., Birmingham (Ala.) • STANDARD SALES COMPANY, Meridian (Miss.) • THE VITA PLUS CORPORATION, Madison (Wis.) • **MIDWEST AREA:** BLOMFIELD-SWANSON, Minneapolis • MERCHANTS CHEMICAL COMPANY, INC., Omaha • M. A. McCLELLAND COMPANY, Kansas City (Mo.) • B. A. LUCIUS COMPANY, Fort Worth • **WEST COAST:** JAMES FARRELL & COMPANY, Seattle • JAMES FARRELL & COMPANY, Compton (Calif.) • **CANADA:** N. D. HOGG LTD., Toronto

Nutrena Introduces Housing, Management System for Meat-Type Hog Production

By JAMES E. SHARON
Feedstuffs Staff

WAUKON, IOWA — A specially-designed housing and management system for production of meat-type hogs was demonstrated on an Iowa commercial swine farm near here April 16 by Nutrena Mills, Inc., subsidiary of Cargill, Inc., Minneapolis.

Called the "Pigloo" system, it is based on recently-developed techniques of antibody protection, animal isolation, natural birth and physical protection of the young, according to Nutrena officials.

(Details on the new system will be reported in a subsequent article in Feedstuffs.)

The complete system, developed by Nutrena's Clarence Whitworth and James S. Collins, a Minnesota animal breeder, is set up as a 900-pig-yearly production unit. There are 16 individual Pigloos for farrowing, separate hutches for sows not actually farrowing, a group of hutches for growing and fattening young pigs after weaning and a single hutch for boars. The system uses a herd of 60 sows, divided into three breeding groups and three breeding boars.

Lower Costs Reported

Both the pre-fabricated Pigloos, which are spaced 8 ft. apart for disease protection, and designs for on-farm construction of auxiliary hutches are offered by Nutrena. Officials told visitors at the Harold Deters farm near Waukon, site of the demonstration, that a complete 900-pig-a-year plant, including watering and feeding equipment in each pen, costs about $11,000 as compared with $30,000 to $40,000 for a 900-pig plant of the currently popular "controlled environment" type.

It was announced also that Nutrena dealers will provide the farmer with technical information on the conduct of the system and will offer a balanced weight-cycle program of bulk feeding. The company will also assist in selecting breeding stock, at the grower's request.

James C. North, Nutrena president, said, "The system is set up for private ownership and management by farmers and is the best answer for those who want to avoid contract hog production. We believe a healthy pork industry can be built with each segment—breeder, grower, feed manufacturer and packer—remaining independent."

The company said its new system is being introduced to farmers throughout the central and southeastern hog-growing states. Demonstrations such as the one in Iowa also have been held in Missouri and Georgia.

Results Listed

Tests of the new system have been conducted during the past three years at 10 on-farm locations in Iowa, Minnesota, California and Wisconsin, according to Mr. North, with these results with about 5,000 animals:

Mortality rate due to crushing of infant pigs by adult animals, which runs to 14% on the national average, was less than 2%.

Disease loss—which can range from 10% to entire litters—was practically zero.

Initial construction cost of housing—for breeding, farrowing, and growing—was less than half that of currently popular large-scale, controlled-environment housing.

Labor required to produce 900 pigs annually was cut from an estimated one man, to one half man.

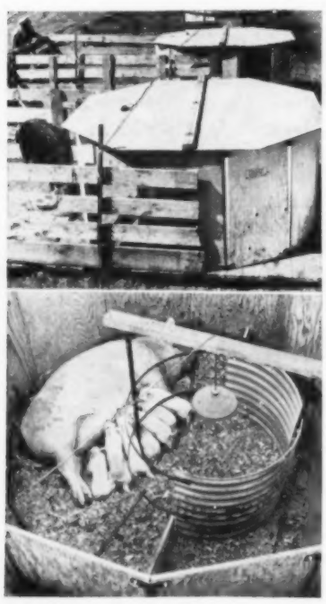
Pig weights at the standard 56-day weighing time were 6 to 10 lb. greater than animals raised in other recommended housing.

Year-round marketing was achieved by scheduled breedings of portions of the sow herd to result in seven farrowings each year instead of the conventional two times.

Work with Bankers

President North said further: "Nutrena will do its utmost to encourage financial backing for farmers wishing to enter production and will assist in selecting prime breeding stock.

"Our system will be explained in full to local bankers and other financial agencies."



NUTRENA HOG PLAN—Key to the complete housing and management plan being offered by Nutrena Mills, Inc., is these pre-fabricated, individual birth units for sows, spaced 8 ft. apart as in top picture. Inside view in lower picture shows sow, conformed to circular shape of unit, with pigs beneath heat lamp in iron-barred center circle which protects them from crushing. Sow leaves unit through door to right of picture, behind protective buffer of corrugated metal, for feed and water.

Iowa Meetings Planned For Mastitis Discussion

AMES, IOWA—Iowa dairymen and veterinarians will hold a series of 10 meetings April 22-30 to discuss control of mastitis on an area-wide basis.

Meetings will be held at Spencer and Mason City April 22, Fayette and Cedar Rapids April 23, Mt. Pleasant and Des Moines April 24, Creston and Council Bluffs April 29 and Sioux City and Carroll April 30.

Mastitis control, milking procedure and care of milk will be discussed at each meeting. The problem of antibiotics in mastitis treatment will be outlined. Dr. John B. Herrick, extension veterinarian at Iowa State College, said dairy and veterinary leaders hope that series of educational meetings may follow in each county to acquaint all dairymen with the problem.

Cyanamid Appoints Three to Key Posts

NEW YORK—Frank S. Washburn, general manager, agricultural division, American Cyanamid Co., has announced the appointments of Dr. J. T. Thurston, B. F. Bowman and G. L. Oppel to key posts in the division.

Dr. Thurston has been appointed technical director, Mr. Bowman marketing director and Mr. Oppel manager of manufacturing.

Cyanamid's agricultural division was created through the merger of the farm and home and phosphates and nitrogen divisions.

Dr. A. C. Groschke Dr. W. J. Monson

Borden Reorganizes Technical Services

NEW YORK—The special products division of the Borden Co., New York, has reorganized its technical services operations.

The announcement was made by Dr. Hartley W. Howard, research director for the division, and Richard G. Sanders, director of sales and marketing for the feed supplements department.

Dr. Albert C. Groschke, formerly technical director for the soy processing and feed supplements department, is now consultant in poultry nutrition to the research department of the special products division. The move is designed to expand research and development activities of the division in the field of nutritional supplements for feed, according to the announcement.

Dr. William J. Monson has been named director of technical service for Borden's feed supplements department. He was formerly technical advisor to the Borden nutritional research laboratory in Elgin, Ill.

Technical service headquarters will be transferred to Elgin, site of Borden's recently expanded nutritional research laboratory and test farm. This central location will permit closer coordination of the department's technical and sales activities, according to Dr. Howard.

Consolidation Planned By Shea and Hooker Chemical Concerns

NIAGARA FALLS, N. Y. — The boards of directors of Hooker Electrochemical Co., Niagara Falls, and Shea Chemical Corp., New York, have approved a formal agreement for the consolidation of the two firms, subject to the approval of the stockholders of both companies.

The companies have directed the calling of special meetings of the respective stockholders on May 28, at which time the consolidation agreement will be submitted for approval. Notices of the meetings and proxy statements are expected to be mailed to stockholders about May 1.

Shea produces and sells dicalcium phosphate for animal feed as well as other phosphate products.

Hooker also produces phosphorus products, although not the same ones as produced by Shea.

Shea has four plants located at Columbia, Tenn; Dallas, Texas; Jeffersonville, Ind., and Adams, Mass. The Columbia plant, in addition to its production of dicalcium phosphate and phosphoric acid, will be a source of phosphorus for Hooker's present phosphorus operations. In the other three plants Shea's phosphorus is processed into sodium tripolyphosphate and other phosphorus products.

Under the terms of the proposed consolidation, Hooker will be the continuing company and its name will be changed to Hooker Chemical Corp.

The consolidation will be effected by the issuance of 800,576 shares of Hooker's common stock in exchange for all of the presently outstanding 1,401,010 shares of class A and class C common stock of Shea, and 41,200 shares of Hooker's common stock in exchange for all of the presently outstanding 6,000 shares of Shea's $7 cumulative preferred stock.

Wholesale Distributors Of Feeds, Allied Lines In Iowa Form Group

DES MOINES—Feed Distributors, Inc., an association of wholesale distributors of feeds and allied lines, was recently formed here.

Purposes of the organization are to promote high standards and sound practices among members and to encourage the discussion and interchange of ideas relative to the industry, an announcement from the group said.

Officers elected recently at Des Moines were Merrill Schlief, Davenport (Iowa) Elevator Co., president; Bert Laufer, Challenge Feed Co., Atlantic, Iowa, vice president; Dick Morris, Waterloo (Iowa) Mills Co., secretary-treasurer. Directors are Harlan Girton, Northwestern Distributing Co., Mason City, Iowa; Harold Holmes, Consumers Supply Co., Storm Lake, Iowa; Eldon Stutsman, Eldon Stutsman Co., Hills, Iowa; Lawrence Jensen, Golden Sun Milling Co., Estherville, Iowa; Joe Donovan, Donovan's, Inc., Albert Lea, Minn., and Frank Johnson, South Omaha Feed Co., Omaha, Neb.

Other members of the association are Doyen Flour & Feed Co., Marshalltown, Iowa; Central Iowa Milling Co., Bagley and Herndon, Iowa; Stotts Grain Co., Rockwell City, Iowa; Hall Roberts Son, Postville, Iowa; Carroll Sales Co., Mason City and Spencer, Iowa; Russell-Miller Milling Co., Sioux City and Cedar Rapids, Iowa; Kay-Dee Feed Co., Sioux City, Iowa; Victoria Feed Co., Davenport, Iowa; Alley Grain Co., Mercer, Mo., and Cornbelt Supply Co., Sioux City, Iowa.

Wholesale distributors of feeds and allied lines who are interested in becoming a member of Feed Distributors, Inc., are asked to contact any one of the directors or members for further information. The next general meeting is scheduled for April 21, at the Hotel Fort Des Moines, Des Moines, Iowa. Members are meeting for lunch at noon, and the meeting will follow immediately thereafter.

"Most Modern" Laying House Built in N. Y.

CANANDAIGUA, N.Y.—An invitation to the public to visit his "egg factory" April 21-26 has been extended by John Carlile, Canandaigua.

Mr. Carlile used the ideas of colleges, industry and poultrymen in the East and Midwest to build what he calls the most modern hen house in the world. He claims it will take only four hours a day to care for his 10,000 laying hens.

All chores in the 60x210-ft. building are done by automatic machinery except gathering the eggs. That job is simplified by a pen arrangement that makes it possible for Mr. Carlile to pick up the eggs in one trip through a passageway running the length of the house.

In an ordinary house for laying hens, 3 sq. ft. of floor space is provided for each hen. Mr. Carlile's birds are packed in with only 1 sq. ft. per hen.

This is made possible by a wood slat floor. Droppings fall between the slats and are cleaned out with an electric scraper.

By housing 10,000 hens in space normally used for a third that number, his investment per hen is cut by 20%, according to Mr. Carlile.

An all-mash laying ration is distributed from two 10-ton bulk feed tanks by automatic feeders running the length of the house. Forced ventilation with electric fans supplies fresh air.

Mr. Carlile and poultry specialists of Cooperative G.L.F. Exchange, Ithaca, N.Y., who helped plan the flock management program, will discuss the system with visitors during the open house.

Soil Bank Acreage Adjustments Not Seen Consequential

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — Adjustments in the acreage reserve program for the soil bank on contracts signed and pending applications for participation in this program, by corn and cotton farmers, are said to be not consequential.

Soil bank officials repeat previous predictions of participation of corn farmers to the extent of 7 million acres in the commercial corn area and 5 million acres of cotton.

They say that the over-all changes represent shifting of participation between states or regions within states, but the total sign-ups will finally show up as about indicated above.

For corn acreage in the commercial corn belt, this would mean an acreage reduction to about 31-million-plus acres, and for cotton, an extremely low acreage of 11-12 million.

Such a cut in acreage for cotton will carve a sizeable chunk out of the cottonseed supply situation next crop year, particularly if cotton production should, because of poor growing conditions, fall as low as 10 million bales.

In the case of corn, producers will be compelled to comply with acreage allotments for this crop and other acreage allotment crops if they are to retain eligibility for soil bank payments.

Beef Cattle Day Set At Washington State

PULLMAN, WASH. — Latest research findings on trace minerals and tranquilizers in beef production will be presented to Washington cattle growers at the Washington State College fourth annual Beef Cattle Day April 25.

Dr. I. A. Dyer, department of animal husbandry and program chairman for the event, recently announced the final program plans, including an hour-long feed clinic.

He said the relatively high incidence of deformed calves in east central Washington is directing a great deal of attention to the possible effects of trace minerals in prenatal development.

Newest research findings on this problem will be reported by A. T. Ralston of the college animal science staff. Mr. Ralston will also report newest developments in studies of vitamin A in cattle.

Karl Hobson, extension price specialist, will give predictions on future cattle prices.

Speakers from outside the state will be Dr. William Lehrer, Jr., University of Idaho animal scientist, and Dr. E. S. E. Hafez, University of Cairo (Egypt). Dr. Lehrer will summarize feed pelleting research; Dr. Hafez will report on dwarfism.

Dr. Dyer will present recent research with tranquilizers, stilbestrol and other feed additives.

Other research reports will cover the effects of certain antioxidants on prevention of white muscle disease, feeding for the right grade and performance testing for profit.

The list of speakers also includes Dr. C. C. O'Mary, O. M. Bowman and John H. Shropshire, all of the college's animal science staff.

The meeting will be held at the new cattle feeding laboratory on the campus.

MILLFEED • FEED GRAIN
FEED INGREDIENTS
What Do You Need?
—Jerry Parks
633 Board of Trade
KANSAS CITY, MISSOURI

Speakers Announced For Annual Indiana Cattle Feeders Day

LAFAYETTE, IND. — The annual Cattle Feeders Day will be held at Purdue University, Lafayette, April 25.

Sponsored by Purdue and the Indiana Cattle Feeders Assn., the event begins at 9 a.m. with a tour of cattle experiments at the new Purdue livestock research farm, three miles north of the campus on the County Farm road.

Claude Harper, head of the Purdue animal husbandry department, will be chairman of a 10 a.m. meeting at which Purdue animal scientists report on research projects. Reports include:

"Controlling the Supplement Intake for Fattening Shorthorn Steers in Drylot and Pasture," by Donald Webb, Lynwood Farm substation.

"Wintering Steers on Hay, Barley, Silage, Wheat Silage, Sorghum Silage, Oat Silage or Corn Silage," by M. T. Mohler, Purdue.

"Corn Silage Versus Sorghum Silage with Various Antibiotics for Fattening Heifers," and "Pelleted Feed Versus Meal for Self-feeding Angus Steers and Heifers," by Dr. T. W. Perry, Purdue.

"Low Versus High Moisture Ground Ear Corn for Fattening Hereford Heifers on Different Protein Supplements," by Robert Honnold, Purdue.

"Effects of Tranquilizers, Hormones and Antibiotics on Feed Lot Performance of Hereford Steers," by Dr. W. M. Beeson.

An afternoon program will be held from 1 to 3 p.m. in the livestock judging pavilion.

Afternoon addresses include: "Fattening Cattle on Pasture," Henry Mayo, Purdue; "What's New in Chicago," Charles Potter, president, Union Stock Yards & Transit Co., Chicago; "Status of Hormones for Cattle Feeding," Dr. F. N. Andrews, Purdue; "Research Is Our Most Important Product," Dr. A. E. Darlow, vice president and dean of agriculture, Oklahoma State University, Stillwater.

Santoquin Use Pends Supreme Court Ruling

KANSAS CITY — The American Dehydrators Assn. reports that Monsanto Chemical Co., St. Louis, has continued its efforts to have the antioxidant Santoquin approved as an additive for dehydrated alfalfa, but that its use is pending a court decision.

The report said a case is on appeal before the U.S. Supreme Court involving the interpretation of the section of the Food, Drug and Cosmetic Act which has been the stumbling block for the approval of the use of Santoquin.

"In view of the fact that the Food & Drug Administration has taken a position in this case which is opposed in principle to the proposed use for Santoquin, it is improbable that the Food & Drug Administration will approve this use until the case in the Supreme Court is decided," Monsanto officials notified the ADA.

"The Supreme Court will probably hand down its decision on the case in the fall of this year, and at that time we will be in a position to have Santoquin approved for use if the Supreme Court decision is favorable, or to carry the Santoquin case to the courts for decision."

New President Named

SAN FRANCISCO — Robert A. Shone, Santa Rosa, is the new president of the Poultry Producers of Central California. Also elected at the group's recent meeting was W. R. Fernandes, Turlock, first vice president, and H. A. McCarrie, Windsor, second vice president. The association reported that it handled a total volume of $49,478,000 in feed and farm production supplies last year.

U.S. Must Improve Swine Quality As Canada Has, Research Report Says

WASHINGTON—How Canada developed high-quality meat-type hogs, and the problems faced by the U.S. in swine improvement are described in a research report issued this week by the U.S. Department of Agriculture.

The report covers findings of a special mission sent to Canada late last year by the USDA to study the problem. The mission found that great improvement in swine quality has been made in Canada since the 1920s to avoid a threatened loss of the Canadian export market. The threat was caused by the fact that Canada's hogs carried too much fat in comparison with those produced in Denmark and other competing areas.

Faced with loss of exports, Canadians established a universal grading system for hogs, later made it compulsory, and switched rapidly to the meat-type hog. Canada also pays a government bonus to growers of the higher quality hogs.

On the basis of equivalent U.S. grades, about 70% of Canadian barrows and gilts would grade U.S. No. 1. Comparable statistics are not available in the U.S., but various estimates have ranged from 15-30% grading U.S. No. 1, the report stated.

More recently, the Canadians have developed improved methods of processing pork by cutting out much of the fat, boning hams and other lean cuts, and otherwise making pork cuts more appealing to consumers.

"The U.S. faces some serious problems in converting to the meat-type hog. For example, U.S. farmers rely on corn as their principal concentrate feed for hogs. Corn is somewhat more fattening than barley and oats, widely used in Canada," according to the USDA.

"Perhaps the most difficult problem lies in the need for developing a marketing system in which substantially higher prices would be paid to U.S. farmers for meat-type hogs than for hogs carrying excess fat," the USDA report said.

"Price differentials paid by Canadian packers for high-quality hogs are greater than those obtainable in the U.S. These higher price differentials, made possible partly by more defatting and boning of pork cuts, have helped encourage swine quality improvement in Canada."

A copy of "Marketing Meat-Type Hogs—Problems, Practices, and Potentials in the United States and Canada," marketing research report No. 227, may be obtained from the Office of Information, U.S. Department of Agriculture, Washington 25, D.C.

Sorghum Alum Banned For Sale in Colorado

COLORADO SPRINGS, COLO. — Sorghum Alum, a feed grain variety of sorghum, has been declared a noxious weed and barred from sales in the state of Colorado.

Reason for the ban is the close resemblance of Sorghum Alum to Johnson Grass seed. The sorghum, although acceptable seed, can't be distinguished from the Johnson Grass, which is a noxious weed. Because of this, the sorghum will also be classified as Johnson Grass until some way is found by the Colorado State Agriculture Commission to identify the one from the other, the commission has announced.

The commission is recommending that farmers who want to raise sorghum use one of the varieties approved for sale and growth in the state.

Fruen's
Minneapolis, Minn.
ACE BRAND ROLLED OATS
(Steam Processed)
if you want good, clean rolled oats at a competitive price
Send for samples and prices today
Mixed cars shipped at straight car prices
Our Teletype number is MP 477
TOWER BRAND ROLLED OATS (Steam processed)
ACE BRAND ROLLED OATS (Steam processed)
KING BRAND ROLLED OATS (Steam processed)
WHOLE OAT GROATS
STEEL CUT OAT GROATS
BOLTED OAT FLOUR
GLENWOOD FEEDING OAT MEAL
FALCON BRAND PULVERIZED WHITE OATS
STANDARD BRAND PULVERIZED WHITE OATS
DAIRY BRAND COARSE GROUND OATS
CRESCENT BRAND PULVERIZED OATS
CORN OATS PELLETS (Corn-Oats)
MIXERS' PULVERIZED OATS
MIXERS' COARSE GROUND WHITE OATS
MIXERS' PELLETED OATS
APEX BRAND CRIMPED WHITE OATS
OAT FEED
STEAM ROLLED WHOLE BARLEY
GROUND BARLEY
PEARLED BARLEY FLAKES (Max. 2½% fiber) (steam processed)
GLENWOOD PEARLED BARLEY
STAR CRACKED PEARLED BARLEY
STEEL CUT WHEAT
ACME GROUND DOMESTIC FLAX SCREENINGS
Millers TO THE FEED TRADE
FRUEN MILLING COMPANY
MINNEAPOLIS 5, MINNESOTA

Governor Signs Bill Amending New York Feeding Stuffs Law

ALBANY, N.Y.—Gov. Averell Harriman has signed a bill to amend the state's commercial feeding stuffs law. The legislation was passed at the last legislature.

The bill provides a fairly complete revision of the New York feed law, bringing it up to date and in accordance with the standards and practices recommended by the Association of Feed Control Officials in its model feed law.

Except for certain basic feeds, the bill includes within the definition of commercial feed all materials used as feed for fowl or animals except cats and dogs. Cats and dogs were eliminated because it was felt that a special study should be conducted before such a law would be made to apply. Cats and dogs, meanwhile, are under the state's Pure Food Law.

Major changes in the law include the following:

Grain screenings, which had previously been classified as a roughage, will be classified as commercial feed and will come under the licensing and labeling requirements of the law.

A requirement is made that artificial color may be used in feed only if it has been shown that such color is harmless to animals or fowl.

It is required that before a license is issued for a feed which contains drugs, hormones or other ingredients which are potentially harmful to fowl or animals, the distributor may be required to submit evidence to show the safety of the feed.

Another major change provides for a more practical regulation of feeds in bulk. For the protection of farmers and feeders, the amendment requires that the feed dealer give to the customer at the time of delivery a printed or written satement of all the materials used and the weight of each. The former law required such a statement only on the request of the customer.

The changes will become effective Jan. 1, 1959.

Cottonseed Products Association to Meet

MEMPHIS—Plans have been completed for the National Cottonseed Products Assn., Inc., convention May 5-6 at the Atlanta (Ga.) Biltmore Hotel, it was announced at the association headquarters in Memphis.

Guest speakers for the business program will include Dr. Pierce Harris, pastor of the First Methodist Church in Atlanta; Dr. Earl L. Butz, dean of the school of agriculture at Purdue University; M. D. McVay, chairman of the board for the National Soybean Processors Assn., and Raymond A. Ioanes, deputy administrator, Foreign Agricultural Service, U.S. Department of Agriculture.

A reception will be held the evening of May 4 at the Piedmont Driving Club. The program May 5 includes a luncheon and fashion show at the Biltmore for the ladies, and a golf tournament at the Capital City Country Club. A dinner-dance is scheduled for May 6. There will be a reception and buffet supper the evening of May 5.

Dupuy Bateman, Jr., is president of the association. Officers will be elected during the convention.

Denver Club Elects M. A. Rust President

DENVER — The Denver Feed & Grain Club elected M. A. Rust as president for the coming year at the annual election held this week at the Denver Press Club.

A turnout of 40 members attended the social hour and steak dinner. The dinner was followed by a floor show.

Other officers elected were Dave Page, vice president; Bill Hutchings, secretary, and Steve Voss, treasurer.

Dairy Feeding Rate Hits April 1 Record

WASHINGTON—The feeding rate of grain and concentrates to milk cows, which normally reaches its peak about April 1, climbed to record levels in all regions of the country on April 1 this year, according to the U.S. Department of Agriculture in its latest milk production summary.

The average rate of 7.34 lb. of grain and concentrates per milk cow was 5% above the previous high being fed on April 1 last year, but 18% above the 1947-56 average for the date.

Seasonally heavier feeding of grain and concentrates on the first of the month in eastern states more than offset declines in southern and western states.

By regions, USDA's report showed the average amount of grain and concentrates fed per milk cow ranged from 8.4 lb. in the north Atlantic states to 6 lb. in the western states. The rate in the east north central region was 8.1 lb.; 7.6 lb. in the west north central; 6.7 lb. in the south Atlantic states, and 6.1 lb. in the south central states.

Methionine Improves Laying Ration, Du Pont Reports

WILMINGTON, DEL. — The Du Pont Company has reported evidence that methionine is the first limiting amino acid in commercial laying rations, as it is in broiler and turkey diets. This was indicated in a progress report covering two experiments involving 1,200 birds.

"A significant improvement in the efficiency of utilization of a laying mash resulted from increasing the energy content and adding supplemental methionine," Du Pont said.

The experimental program was conducted in cooperation with a large commercial poultry farm in New Jersey. It included a 17-week exploratory test, followed by a sustained 56-week test. Each involved a typical laying mash containing normally recommended protein levels. Comparisons were then made on effects of adding methionine, energy and the two combined.

"In the exploratory test," the report said, "feed efficiency improved somewhat when methionine and energy were added separately to the basal diet. The two together resulted in a 15% improvement. In the long-term test, however, the basal ration was improved to an economically significant extent only when both energy and methionine were added. Supplementation with either one alone resulted in no measurable change. This indicates a parallel to previous Du Pont findings on the methionine-energy relationship in broiler feeds.

"The basal diet in the 56-week test was a typical laying mash containing 15.6% protein and 991 calories per pound. The second ration contained 14.9% protein and 1096 calories. For the third and fourth diets, each ration was supplemented with 0.05% methionine. The higher energy ration, with methionine added, showed a feed efficiency of 3.41 lb. of feed per pound of eggs, compared with 3.66 for the diet giving the poorest performance in the test.

"In the 17-week test, the basal diet, with methionine added, produced a pound of eggs on 0.14 lb. less feed than when it was unsupplemented. When the energy level of the diet was increased about 10%, the advantage due to methionine more than tripled. The 56-week test confirmed the superior value of methionine in the higher energy diet."

As a result of these findings, Du Pont said, it is continuing an expanded study of methionine supplementation of various commercial-type laying rations at additional locations.

Dr. Ernest Volwiler | George R. Cain | Edward Ravenscroft

Executive Promotions Announced by Abbott

NORTH CHICAGO, ILL.—Dr. Ernest H. Volwiler, president and general manager of Abbott Laboratories, has been elected chairman of the Abbott board of directors.

George R. Cain, formerly executive vice president, was elected to succeed Dr. Volwiler as president and general manager; Edward A. Ravenscroft, formerly financial vice president, was elected executive vice president.

They were elected at the board's recent annual meeting following the shareholders' annual meeting at the company's main plant and executive offices in North Chicago.

Dr. Volwiler assumes the post which had been vacant since Jan. 21 when James F. Stiles, Jr., took early retirement from the company to accept a federal government position as assistant to the Secretary of the Treasury and national director of the U.S. Savings Bonds Division.

Dr. Volwiler joined Abbott in 1918 as a research chemist and in 1920 was named chief chemist. He became director of research and a member of the board of directors in 1930, vice president in charge of research and development in 1933 and executive vice president in 1946.

In 1947 Mr. Cain became administrative assistant to the president and a member of the board of directors. He had been executive vice president since 1950.

Mr. Ravenscroft became director of engineering and a member of the board of directors in 1944. He was elected vice president in charge of engineering in 1951, vice president and comptroller in 1955, and financial vice president in 1957.

Increasing Sales

The firm also announced recently that preliminary sales figures during the first quarter of 1958 indicate a 12.5% increase over the same period last year.

"Each of the three months of this year has exceeded last year's results, and the month of March showed the largest gains," Dr. Volwiler said. "Both domestic and foreign operations have shared in these increases."

In 1957, first quarter sales amounted to $29,311,000. Total 1957 sales were a record-high $111,271,000.

The firm's capital expenditures, which amounted to $7,700,000 in 1957, "are expected to be of the same order of magnitude in 1958," Dr. Volwiler said.

Included among a number of domestic and foreign projects is a new $6,000,000 research building. Construction on the eight-story building is expected to begin in June with the aim of occupying at least a portion of the new laboratories in 18 months.

Slim Pickings on Corn Exports Expected the Balance of Crop Year

WASHINGTON — Indications are that the grain export trade will have slim pickings on corn for the balance of the crop year after the U.S. Department of Agriculture issues the subsidy-in-kind export regulation. The regulation is expected to be in operation May 1, or shortly thereafter.

Government officials in agencies familiar with export problems are forecasting total corn exports for this crop year at about 130 million bushels, with some estimates as low as 125 million.

As of April 4, USDA officials say that approximately 110 million bushels have already moved. This leaves not more than 17-18 million bushels for private-trade exports from purchases on the free market. About 2-3 million bushels would come from Commodity Credit Corp. stocks, if all subsidy-in-kind certificates were redeemed in terms of corn.

It is understood that the USDA plans to make subsidy-in-kind certificates for feed grain redemption interchangeable with corn, oats, barley, rye and grain sorghums.

Inquiries indicate it is necessary to emphasize that the subsidy-in-kind program will include rye. Requests for information on that point disclose that many segments of the trade have either overlooked or never learned that rye is included.

Rye, it appears, is one of the grain crops which may be the object of much speculative attention since it is a relatively small crop. With an adequate subsidy rate it may be expected that substantial exports from a small crop may turn the speculative trade attention to later rye commodity market futures contracts which would be vulnerable to bullish aspects of an adequate subsidy announcement.

The rye subsidy-in-kind phase of the program would not become operative before July 1, 1958.

Cereal Chemists Will Visit Red Star Plant

CHICAGO—Members of the Midwest section of the American Association of Cereal Chemists will go to Green Bay, Wis., May 5 to tour the torula yeast plant of the Red Star Yeast & Products Co., Milwaukee.

The group will gather at the Pfister Hotel in Milwaukee, and will leave from there at 10 a.m. on buses provided by Red Star. The firm will be host to the group at a 12:15 lunch.

After the lunch, short, introductory talks will be given by Red Star personnel. They are H. J. Peppler, W. Jacobs and Dr. P. P. Merritt. They will discuss Torula (Candida utilis), as to its background, biology, production and application in cereal and feed industries.

There will be plant inspection tours from 2:15-3:30. The group will return to Milwaukee by 5:30 and hold its regular dinner meeting.

CHARTER GRANTED

DENVER — Valley Feeders, Inc., Greeley, Colo., has been granted a charter. Incorporators are Charles W. Bessee, Grace E. Bessee, and Oliver G. Nix. They are also directors. The firm is to be a general feeding and farming business. Capitalization was listed at $50,000.

the Pak-Master Line

SELF UNLOADING BULK FEED BODIES

THE WORLD'S FINEST IN BULK DELIVERY EQUIPMENT

PM-65-C
COMB. AUGER CONV.

PM-65-C
WITH HOIST

PM-40-CH
COMB. HYDRAULIC

PM-50-CH
COMB. HYDRAULIC

PM-60-CA
COMBINATION AIR

Pak-Master FEED BODIES ARE DESIGNED TO UNLOAD FEED NOT GRIND IT

MODEL PM-75-C

PM-10-HH
HOPPER HYDRAULIC

PM-25-HA
HOPPER AIR

PM-30-HM
MECHANICAL

PM-15-HH
HYDRAULIC

BACKED BY YEARS OF ENGINEERING "KNOW HOW"
IN BULK FEED BODY DESIGN!
QUALITY CONTROLLED MANUFACTURING!
COMPLETE LINE, PROMPT DELIVERY & COURTEOUS SERVICE

"When you own a PAK-MASTER you own the very best"

GADDIS BROS. MFG. CO., INC.

WALFORD, IOWA

WRITE FOR FURTHER INFORMATION

Formula Feeds Are 29% of All Concentrates Fed to Milk Cows

WASHINGTON — Commercial mixed feeds accounted for approximately 29% of the concentrate rations fed to milk cows in the U.S. in 1957. This is shown in a special U.S. Department of Agriculture report on amounts and types of concentrates fed to milk cows in the various states and regions of the country.

The total amount of grain and other concentrates fed to milk cows in 1957 was about 19.9 million tons. In herds kept by USDA's dairy reporters, 29.2% of the concentrates were in the form of commercial mixed feed. Assuming this percentage held for all cows, the total amount of formula feed fed to dairy cows last year was about 5.8 million tons.

Use of commercial feed showed a slight gain over the preceding year, USDA pointed out.

The total of 19.9 million tons of concentrates fed to milk cows in 1957 was 4% greater than in the previous year and the largest of record. More grain and concentrates were fed in 1957 than in the previous year in all regions except the north Atlantic. Wisconsin led all other states.

The quantity fed per cow averaged 1,945 lb. on all farms where milk was produced. This was 7% more than in the previous year. The annual rate varied considerably by regions. (See table 1.)

The composition of the rations fed to milk cows in dairy reporters' herds (Table 2) changed slightly from 1956. Use of corn and commercial mixed feeds showed some gain, but the proportion of oats included in the concentrates decreased.

Use of the different feeds varies widely by area, as Table 2 shows. For example, corn and small grains continued to make up by far most of the rations fed in some midwestern states, while commercial mixed feed accounted for most of the concentrates fed in feed deficit areas like the East and West.

Dairy reporters indicated that 49% of the grain and concentrates fed to their milk cows in 1957 was grown on their own farms. This compared with 50.6% the previous year and 52.1% in 1955. Thus, the percentage of homegrown feeds has been declining.

As might be expected, the percentage of homegrown feeds varies widely by areas, from 1% or less in California, Florida and most of New England to 75% or more in many north central states.

TABLE 1. Grain and Other Concentrates Fed to Milk Cows on Farms Where Milk or Cream Was Sold and on Farms Where Milk Was Produced for Home Use Only, by States, 1957*

State and division	—On farms where milk or cream was sold— Fed per 100 lb. milk	Fed per cow	Total fed	On farms where milk was produced for home use only Fed per cow	Total fed	On all farms where milk was produced Fed per cow	Total fed
	lb.	lb.	1,000 tons	lb.	1,000 tons	lb.	1,000 tons
Maine	31	2,040	99	1,480	8	1,980	107
New Hampshire	27	1,740	48	1,220	2	1,720	50
Vermont	29	1,860	254	1,330	2	1,860	256
Massachusetts	29	2,170	112	1,440	3	2,150	115
Rhode Island	29	2,380	18	1,460	1	2,310	19
Connecticut	30	2,200	108	1,480	3	2,180	111
New York	30	2,220	1,433	1,460	17	2,210	1,450
New Jersey	32	2,570	176	1,620	4	2,540	180
Pennsylvania	34	2,370	1,060	1,580	37	2,330	1,097
North Atlantic	31.2	2,232	3,308	1,510	77	2,208	3,385
Ohio	33	2,260	891	1,590	33	2,230	924
Indiana	32	2,270	592	1,660	23	2,240	615
Illinois	32	2,260	809	1,610	34	2,220	843
Michigan	30	2,100	796	1,500	17	2,080	813
Wisconsin	27	2,070	2,350	1,320	6	2,070	2,356
E. N. Central	29.5	2,152	5,438	1,580	113	2,136	5,551
Minnesota	28	1,940	1,334	1,400	10	1,930	1,344
Iowa	32	2,090	995	1,590	32	2,070	1,027
Missouri	36	1,810	659	1,450	61	1,770	720
North Dakota	28	1,440	236	1,130	10	1,420	246
South Dakota	29	1,410	199	1,030	10	1,390	209
Nebraska	28	1,570	299	1,230	15	1,550	314
Kansas	33	1,770	341	1,420	24	1,740	365
W. N. Central	30.5	1,833	4,063	1,392	162	1,812	4,225
Delaware	34	2,150	31	1,520	2	2,090	33
Maryland	34	2,300	249	1,570	14	2,240	263
Virginia	31	1,790	265	1,300	57	1,680	322
West Virginia	31	1,440	94	1,070	26	1,340	120
North Carolina	35	1,960	196	1,440	114	1,730	310
South Carolina	42	1,980	79	1,290	46	1,660	125
Georgia	46	2,100	163	1,370	99	1,750	262
Florida	75	4,320	367	2,270	40	3,970	407
South Atlantic	40.4	2,262	1,444	1,405	398	1,998	1,842
Kentucky	35	1,660	382	1,300	79	1,590	461
Tennessee	38	1,600	374	1,290	96	1,530	470
Alabama	48	1,850	144	1,430	126	1,630	270
Mississippi	48	1,590	233	1,230	131	1,440	364
Arkansas	44	1,730	180	1,420	76	1,630	256
Louisiana	48	1,590	142	1,070	63	1,380	205
Oklahoma	40	1,860	267	1,410	53	1,770	320
Texas	48	2,140	530	1,630	190	1,980	720
South Central	42.2	1,770	2,252	1,365	814	1,641	3,066
Montana	25	1,390	56	980	6	1,340	62
Idaho	20	1,460	147	1,030	5	1,430	152
Wyoming	23	1,300	20	940	3	1,240	23
Colorado	28	1,750	114	1,360	11	1,710	125
New Mexico	28	1,470	23	1,040	7	1,360	30
Arizona	22	1,790	40	1,130	3	1,720	43
Utah	22	1,660	77	1,200	5	1,630	82
Nevada	20	1,370	8	650	1	1,210	9
Washington	26	1,950	226	1,280	14	1,890	240
Oregon	26	1,650	138	1,130	9	1,610	147
California	25	2,250	944	1,370	20	2,220	964
Western	24.6	1,926	1,793	1,199	84	1,875	1,877
U. S.	31.2	2,018	18,298	1,387	1,648	1,945	19,946

*Includes grain, millfeeds and other concentrates.

TABLE 2. Individual Feeds as Percentage of the Total Concentrate Ration Fed to Milk Cows in Herds Kept by Dairy Reporters, by States, 1957* (Per Cent)

State and division	—Small grains— Corn	Oats	Barley	Wheat	—Oil seeds and oil-seed meals— Cottonseed meal	Cottonseed	Linseed meal	Soybeans or soybean meal	—Other millfeeds— Gluten feed or meal	Wheat bran, shorts	Commercial mixed feed	Misc. other
Maine	1	3	..	..	..	..	..	..	..	..	92	4
New Hamp.	..	..	..	..	..	..	..	..	..	..	92	8
Vermont	1	2	..	..	..	..	..	..	..	..	89	8
Massachusetts	..	1	..	..	..	..	..	..	..	..	84	15
Connecticut	..	..	..	..	..	..	..	..	..	..	89	11
New York	7	16	2	1	..	..	1	..	1	2	67	4
New Jersey	14	6	7	1	..	..	1	1	1	1	58	10
Pennsylvania	28	21	5	1	..	..	..	3	..	3	36	3
N. Atl.	12.9	14.2	2.8	.8	..	..	.1	1.0	.5	1.9	60.8	5.0
Ohio	60	21	1	1	..	..	1	5	..	2	5	4
Indiana	62	23	1	..	..	..	..	2	..	1	4	7
Illinois	58	29	1	..	..	..	1	2	..	2	5	2
Michigan	49	32	3	1	..	..	..	4	..	1	6	4
Wisconsin	37	40	2	..	..	..	4	2	1	5	7	2
E. N. Cent.	48.4	32.2	1.7	.3	..	..	2.0	2.8	.4	3.1	5.9	3.2
Minnesota	48	37	1	..	..	..	1	2	..	2	7	2
Iowa	63	24	..	..	..	..	..	3	..	1	8	1
Missouri	29	10	4	1	..	..	1	3	..	9	40	2
N. Dak.	5	77	9	2	..	..	..	1	..	..	3	3
S. Dak.	37	50	3	..	..	..	..	1	..	..	4	5
Nebraska	50	18	4	..	1	..	..	3	..	3	14	7
Kansas	17	20	9	..	2	..	..	3	..	9	13	27
W. N. Cent.	43.1	29.6	2.7	.3	.4	..	.5	2.5	..	3.3	13.2	4.4
Delaware	43	7	13	..	..	..	..	3	..	1	28	5
Maryland	38	14	9	1	..	..	..	2	..	3	28	5
Virginia	23	10	9	1	1	1	..	1	..	3	45	6
W. Virginia	20	5	3	1	..	..	..	2	..	2	63	4
N. Carolina	30	18	4	3	7	1	..	1	..	4	30	2
S. Carolina	26	19	2	..	7	1	..	2	..	..	37	6
Florida	2	..	..	..	1	..	..	..	..	1	49	47
Georgia	24	12	1	..	7	1	1	1	1	2	43	7
S. Atl.	21.7	9.6	4.4	.8	2.6	.5	.1	1.1	.1	2.2	41.2	15.7
Kentucky	60	4	4	1	..	..	..	4	..	4	18	5
Tennessee	49	9	2	2	4	1	..	3	..	2	24	4
Alabama	47	5	..	..	19	4	..	1	..	1	15	8
Mississippi	42	15	..	..	17	1	..	3	1	..	21	..
Arkansas	9	9	1	1	1	1	..	1	1	9	66	1
Louisiana	18	8	..	..	12	4	..	1	1	4	48	5
Oklahoma	10	19	4	1	4	1	..	1	..	13	36	11
Texas	10	11	..	..	6	..	..	..	1	6	57	9
S. Cent.	31.1	10.1	1.6	.7	6.4	1.0	..	1.8	.4	5.0	36.1	5.8
Montana	..	42	43	3	..	..	..	..	..	2	7	3
Idaho	4	35	26	11	..	..	..	..	..	2	15	7
Wyoming	1	18	48	1	1	..	..	1	..	1	27	2
Colorado	17	17	34	2	2	..	..	1	..	3	18	6
Arizona	..	..	15	..	15	..	..	..	..	..	70	..
Utah	1	10	55	8	1	..	..	..	..	2	22	4
Washington	2	10	4	1	..	..	1	..	..	6	75	1
Oregon	1	14	11	1	..	..	..	..	..	5	66	2
California	1	2	5	1	2	..	1	..	..	4	74	10
West.	2.5	9.3	13.0	2.1	1.7	..	.6	.1	..	3.9	59.5	7.3
U. S.	32.0	21.6	3.4	.7	1.2	.2	.8	1.9	.3	3.2	29.2	5.5

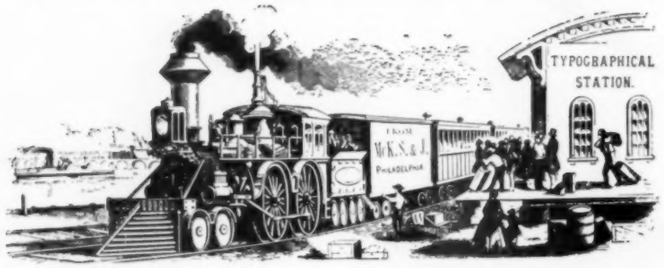
*Based on reports of rations fed on May 1 and Nov. 1. Several minor states not shown separately are included in regional and U.S. averages.

BLACKSTRAP MOLASSES
ANIMAL FEED SUGAR
Olavarria & Co., Inc.
79 Pine Street
New York 5, New York

MOLASSES TERMINALS
New Orleans, La.
Paulsboro, N.J.

TELEPHONE:
WHitehall 3-6930
TWX: NY 1-4409

GRAIN DRIERS BECOME OBSOLETE, TOO!



Transmission of less than 5 h.p. to the draw bar for each 100 h.p. of energy developed from the fuel makes this steam engine obsolete and uneconomical. Scientific and engineering advances in today's engines provide lower cost and more efficient transportation.

Modern Aeroglide Driers Lower Operating Costs and Give Better Grain Quality

Modern scientific and engineering advances made in Aeroglide Driers do make older driers obsolete. Grain drying is an exacting process. It demands a scientific approach to such factors as ambient temperature, vaporization, optimum air speeds, heat transfer rate and material agitation.

Since excess moisture in grain is internal moisture, it is mandatory that an efficient grain drier maintain the greatest practical vapor pressure differential between the product and the surrounding air. Limited by critical temperature, Aeroglide develops a positive vapor pressure by uniformly heated air circulation, plus thorough agitation of the product. Through accurate and sensitive temperature and "rate of flow" controls, care is taken to avoid glazing of the grains outer surface.

Full comprehension of these factors have made it possible for Aeroglide engineers to build a grain drier that gives better grain quality and low operating costs.

Find out for yourself why an Aeroglide Grain Drier will be more profitable for you to own. We will be glad to send you an illustrated booklet of complete information backed up with facts and figures, without obligation. Write, wire or phone, now.

© Reg. U. S. Pat. Off.

Aeroglide Corporation
Phone TEmple 2-6422 - Cable: AEROGLIDE
510 Glenwood Ave. - Raleigh, North Carolina

GAS, OIL AND LP GAS FIRED GRAIN DRIERS WITH 200 TO 5,000 BU. PER HR. CAPACITY FOR DRYING CORN, SOYBEANS, RICE, WHEAT, BARLEY, MILO, LUPINE, BUCKWHEAT, PEANUTS, COFFEE, ETC.

120

Discuss Use of Insecticides for Livestock Pests

ST. LOUIS, MO.—Sections on medical and veterinary entomology, research, biological control, systematics and systemics were held at the Sheraton-Jefferson Hotel here during the 13th annual meeting of the North Central Branch, Entomological Society of America.

A panel discussion on animal systemic insecticides attracted a large group on March 28, with A. W. Lindquist, USDA, as moderator. In his opening remarks, the chairman gave the audience background information on the use of systemics in animals for control of cattle grubs. Some success has been experienced, he reported, but there are still areas in which more information needs to be gained. These lie particularly in timing . . . when to apply and when not to do so in relation to the animal's nearness to slaughter. He said that more needs to be known about the mode of action of systemics within the animal's body.

Dr. G. R. DeFoliart, University of Wyoming, described some of his experiences with systemic insecticides for control of both grubs and lice on livestock. He told of tests involving some 500 animals, wherein the systemic materials were administered orally through feed; injected into the animal, and sprayed on its hide.

Cattle lice, he said, are the number one winter parasite of cattle. The present methods of controlling these pests is through spraying and dipping, but the need is for an orally-taken compound successful in the control of both grubs and lice. So far, he said, there is no such product that will do both.

After extensive tests with many varieties of pesticides and methods of application, Dr. DeFoliart said that no toxic symptoms have appeared on the treated cattle.

South Dakota Studies

Dr. William M. Rogoff, University of South Dakota, reported that previous tests with systemics for control of cattle parasites showed sufficient promise to warrant a much larger program. The one launched last year involved 2,000 head of livestock.

Significant results were obtained in the tests, he reported, with the treated cattle averaging 1.3 grubs each as compared to 15.4 on the untreated livestock. However, some toxic effects were noted under some conditions, pointing up the problem, he said, of how to offer adequate recommendations for indiscriminate use of the products. He pointed out that systemics can be used without too serious ill-effects, but more care must be taken than the average cattleman is likely to give.

Results though significant in the over-all picture were not always outstanding, Dr. Rogoff said. Under adverse field conditions, the reduction in grub counts following spraying was not as great as that achieved under the optimum situation at the experiment station.

Feed Company Tests

Dr. R. A. Sturdy, research director for the Moorman Manufacturing Co., Quincy, Ill., showed a series of slides demonstrating the beneficial results of feeding various amounts of systemic insecticides to cattle for grub control. The test animals, with the hair shaved off of large areas of their backs, presented evidence of the successful program. Check animals had large lumps and bulges all over the clipped area, while the treated stock presented sleek, flawless surfaces completely free from parasite damage.

No off-flavor, toxic effects, nor other evidence of injury either in the animal or its meat was detected, Dr. Sturdy said. Some of the cattle were fed much larger doses of the systemic materials than would normally be necessary.

USDA Releases Rice, Soybeans for Export

WASHINGTON—The U.S. Department of Agriculture announced that it has made limited quantities of 1956-crop soybeans and California Pearl rough rice available for export under the barter program.

According to the announcement contractors will be required to export the rice and soybeans to countries to which the imports will represent a net addition to U.S. marketings. These countries will be designated as "Group I."

Until the Group I list is completed, proposals to acquire Commodity Credit Corp.-owned rice or soybeans for export will be considered on a case-by-case basis, according to the USDA.

Contractors desiring to export rice or soybeans to friendly countries other than those appearing on the Group I lists should submit on a prescribed form a statement by a responsible official of the importing country that the rice or soybean imports would represent net additions to anticipated marketings of U.S. commodities, the announcement stated.

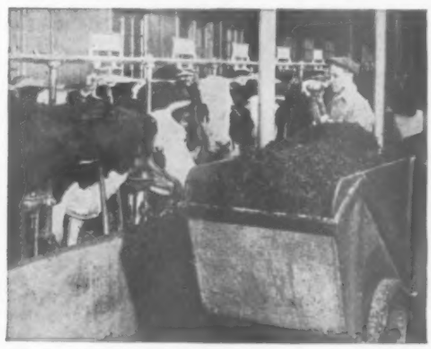
It said further that statements should be submitted to the barter and stockpiling division, Commodity Stabilization Service, U.S. Department of Agriculture, Washington 25, D.C. The division reserves the right to review and determine the sufficiency of the statement.

BUILDS NEW MILL

WOOLSTOCK, IOWA — Construction of a new feed mill for the Woolstock Farmers Cooperative is under way. The $93,125 installation is to be completed by Aug. 1. It is to be built of reinforced concrete and to be equipped for both bulk and sacked feeds. Midstates Construction Co., Omaha, Neb., is the contractor.

HI-SEAS
stabilized
MENHADEN FISH MEAL
and
MENHADEN WHOLE MEAL
(with fish solubles)
FIRST with . . .
GUARANTEED ANALYSIS
(of over-all Protein Digestibility and Amino Acids)
EXCLUSIVE ANTI-OXIDANT PROCESS
HIGHEST METABOLIZABLE ENERGY VALUES
write for full details to:
HAYNIE MENHADEN PRODUCTS INC.
WILDWOOD, N. J.
HI-SEAS

RUMEX
The ORIGINAL dried
RUMEN INOCULUM
HELPS DAIRY AND BEEF CATTLE UTILIZE HIGH ROUGHAGE FEEDING



FOR FASTER WEIGHT GAINS INCLUDE RUMEX IN YOUR FEEDING PROGRAM

Not all roughage is of high quality. That's one reason why the feeding of dried rumen organisms is needed for cattle to utilize high roughage feeding.

Rumex does this job best as it contains the safe processed contents from the Rumens of Healthy, Mature Animals. RUMEX was the first to be of PROVEN VALUE by a leading Experiment Station in CONTROLLED FEEDING TESTS. These tests showed that RUMEX provides active growth stimulating factors from rumen microflora.

RUMEX has been used for many years as an aid in preventing and treating feeding problems resulting from non-infectious rumen dysfunction, such as conditions due to change of environment, switching from pasture to dry lot feeding, bloat, poor appetite and such other conditions requiring the re-establishment of the natural flora. RUMEX aids in correcting lack of appetite and in avoiding simple types of scours.

CUSTOM MIXING IS FAST AND EASY

2 to 3 pounds RUMEX are recommended per ton of feed to improve rumen function and aid digestion. Added to protein supplements, RUMEX aids in top grade finish more rapidly.

Write for the RUMEX PORTFOLIO, Today.

DISTRIBUTORS
The Amburgo Company, Inc., Philadelphia 7, Penna.
Ivan Scanlan & Co., 5605 Lyndale Avenue South, Minneapolis, Minnesota
Carroll Swanson Sales Company, Des Moines 9, Iowa

VITAMINS, INC. 809 W. 58th Street, CHICAGO 21, ILLINOIS
Basic Material Manufacturers and Headquarters for Technical Information.

No antibiotic now on the can beat the performance in building profits,

Broiler profits
are protected . . .
with
BACIFERM®

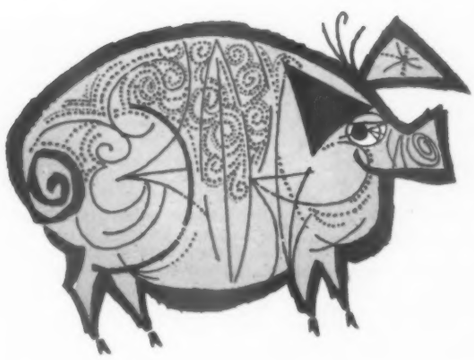
Layers produce
full time . . .
with
BACIFERM®

the feed that contains **BACIFERM®**
. . . with greater profits to you

ANIMAL NUTRITION DEPARTMENT **COMMERCIAL SOLVENTS CORPORATION**
CANADIAN SALES REPRESENTATIVE: Norman Stark

market of BACIFERM® protecting against disease

Pigs pile on the pounds . . . *with* BACIFERM®



Poults speed to market . . . *with* BACIFERM®

does the job

Baciferm costs you $3 to $6 *less* per ton than the tetracyclines. So if you produce 100 tons of high-level feed per month, you save $300 to $600 per month. That's $3600 to $7200 per year! Only Baciferm contains the antibiotic zinc bacitracin, made exclusively by CSC under Patent No. 2,809,892 issued October 15, 1957. Whatever feed you make, trust Baciferm to do the job.

BACIFERM®

Zinc Bacitracin Antibiotic Supplements
FOR HIGH-LEVEL FEEDING AT LOW-LEVEL COST

60 MADISON AVENUE, NEW YORK 16, N. Y.
N MEXICO: Comsolmex, S. A., Mexico 7, D.F.

CSC

BURROWS MODEL 1200 BULK SCALE

Speeds handling ...Saves money!

price: **$295.00**

Complete — F.O.B. Plant

Built-in Fairbanks-Morse Scale saves costly delay at floor scales or hopper.

specifications

Capacity	1000 lbs.
Width	30"
Height	38"
Length of hopper	46"
Dump Gate	8"x14"
Front Wheels	10"x2½"

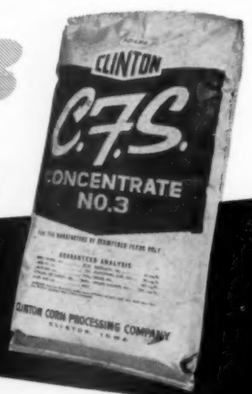
Rugged, practical, low-cost . . . this popular, efficient scale is built for long, hard use. Saves you time and money in handling all grains, feeds. Highly accurate, it weighs down to the ounce. Sharply-sloped bin, for complete discharge; rear-control dump gate; two-wheel foot brake. Rubber wheels and roller bearing casters make full-load handling easy, fast, simple.

Write for complete details . . . FREE CATALOG

BURROWS EQUIPMENT COMPANY
1316 C SHERMAN AVE.
EVANSTON, ILLINOIS

C.F.S. #3 concentrate

(Corn Fermentation Solubles)



FOR POULTRY AND SWINE RATIONS

Improves efficiency for the feeder Improves profits for you

Developed for modern, high efficiency rations, and for manufacturing registered feeds, Clinton C. F. S. #3 is a free-flowing concentrate of Corn Fermentation Solubles dried on nutritious corn by-products.

Exceptionally potent in organic and inorganic factors, important B vitamins and quality proteins, Clinton C. F. S. Concentrate #3 is a profitable ingredient for the feed manufacturer or mixer. It can partially replace or even eliminate more costly sources of unidentified growth factors and other important nutrients.

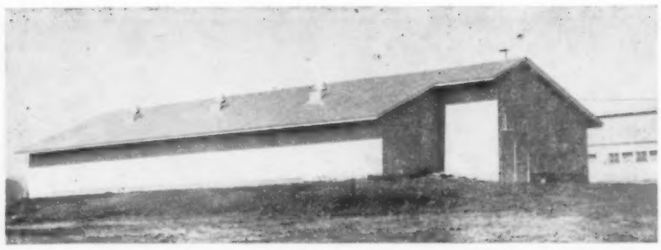
Clinton C. F. S. Concentrate #3 will provide you additional profit . . . will provide the feeder improved growth, higher feed efficiency.

Write for full details.

Quality products
FROM THE WORLD'S CORN CENTER

CLINTON

CLINTON CORN PROCESSING COMPANY
CLINTON, IOWA



This is the new and unique cage layer house on the poultry farm at Oklahoma State University in Stillwater. The building houses 576 birds in individual cages. Designed as a special research tool, the house has no windows, is fully insulated, has a temperature control system to eliminate extremes and is equipped with individual feeders and waterers on the cages. Total floor space is 3,814 sq. ft., including a cage room of 3,060 sq. ft.

Birds Are Individually Fed in New Oklahoma Cage Layer House Designed for Research

By ROGER BERGLUND
Feedstuffs Managing Editor

A few months ago, the Oklahoma State University poultry science department put in a requisition for 576 cream cans. When this request hit the desk of the dean, it wasn't long before the intra-campus phone line to the department head's office was humming with the query: "What in blazes do you fellows in the poultry department want to do with 576 cream cans? Have you gone so far that you now have chickens producing milk?"

"No, we haven't gone that far—yet," replied the department head. "But we do hope to get to the point where we'll have hens producing a dozen eggs on 2 lb. of feed. And we need the cream cans in our research to help us get there."

Some selling by the department head, Dr. John West, and by Dr. Rollin Thayer, in charge of poultry nutrition research at OSU, convinced the dean. Now the 576 cream cans are part of the facilities for some basic poultry nutrition research getting under way at the university.

The work at the Stillwater, Okla., school is being conducted in a new and unique 576-cage house designed strictly for research purposes. Dr. West says that he knows of no similar house being built anywhere else.

Individual Feeding

The birds will be individually fed, the idea being to get the most accurate data to measure the smallest differences possible, at the least possible cost. In other words, it's a case of using the least number of birds to provide the most data, getting the greatest return in data from each research dollar spent.

It's this individual feeding where the cream cans come into the picture. Beneath each cage is a cream can containing the feed for a particular hen.

Each of the 576 individual cages in the house has its own feeder and waterer.

The 34 by 112-ft. building, including a 34 by 90-ft. cage room, has no windows, is completely insulated and has a ventilation-heating system which will maintain uniform interior temperatures within a range of 40° to 90° the year around.

All of which, explained Dr. West, indicates that the cage house is a special research tool and is not a commercial-type house.

Dr. Thayer and Dr. West drew up the general plans for the unusual research set-up.

Dr. Thayer figures that with 576 individually fed birds, one can get as much basic research data as he could with several thousand birds on the floor under usual conditions, and do it more accurately and quickly.

In the long run, said Dr. West, a system using individual feed consumption records is less expensive. "Statistically," he notes, "you can do as much with 10 birds individually fed as you can with 100 in four groups of 25 each."

Dr. Thayer pointed out that the building was designed in consultation with statisticians so that maximum use could be made of statistical methods in obtaining and using data.

Initially, he said, there are four projects in the new cage house:

1. One is a uniformity trial using

Looking over a pullet in the new cage house are (left to right): Dr. William E. Shaklee of the U.S. Department of Agriculture; Dr. John West, head of the Oklahoma poultry science department, and Dr. Rollin Thayer, professor in charge of poultry nutrition research. Dr. Shaklee, reviewer from the State Experiment Stations Division of USDA's Agricultural Research Service, was in Stillwater to review work done at the Oklahoma station during the past year. Dr. West and Dr. Thayer designed the unusual house.

Oklahoma State University researchers are weighing pullets in their new cage layer house, designed specifically for basic nutrition research. Standing are Kenneth Dunkelgod (left), poultry instructor at OSU, and Earl Gleaves, research assistant. Recording the weights is Lavona Baker, poultry science department secretary. Note the individual feeders on the cages. Beneath the cages may be seen cream cans which contain feed for each cage. The individual feeders and containers make possible individual feed consumption records.

192 of the hybrid pullets recently put into the house. The aim is to determine whether there are variations in conditions and results in different positions in each direction in the house.

2. One of the basic nutrition research trials is on nutrient requirements of hens fed high energy layer-breeder rations. This year vitamins are being studied. Next year it will be protein and energy levels and interrelationships. It's research like this that has as an eventual goal the development of a ration that will turn out a dozen eggs from 2 lb. of feed.

3. Another study will be on digestibility and metabolism of feeds. This ties in with No. 2. The researchers may even use surgical techniques to separate urine and fecal material. Ultimately, said Dr. Thayer, work like this will help in the basic aim of getting feed costs down further.

4. A fourth project is physical and chemical studies of egg shell quality. The researchers hope to answer such questions as why shells are strong at first and then become weaker and weaker, what the differences are in structure. Radioisotope techniques will be used.

Dr. Thayer and Kenneth Dunkelgod, poultry instructor, will supervise the research. Research assistants are Earl Gleaves and Don de Steiguer. The Oklahoma scientists feel that all nutritional requirements and interrelationships need to be redetermined in the light of newer knowledge, and that's one of the aims of the basic research. Any of the three current basic projects, it is felt, can reveal principles of poultry nutrition that can be used in planning applied research in other OSU facilities.

Some of the experimental rations are complicated and expensive and, in connection with the individual feeding, Dr. West notes that 10 or 20 birds can be fed for less than 100. Labor and other costs are less, too.

The approach in the cage hen studies will be like that in recently reported turkey work at OSU. The researchers say they are not going to spend time on what is known, or on common rations. They hope to get down to some basics and show just what can be done, and then seek to lower ration costs along with the expected better feed efficiency.

House Construction

The new house has total floor space of 3,814 sq. ft., including the 3,060 sq. ft. in the cage room. There also are a 34 by 16-ft. service room and a 21 by 10-ft. utility room. Prof. R. R. Irwin, mechanical engineer at the university, designed the temperature control system and prepared the specifications for the house.

The house is a frame building, with prefabricated trusses, and it has asbestos board inside and cut. There is fiberglas insulation throughout. There are 24 blocks of cages, with 24 10-in. commercial-type cages in each. Temperatures are thermostatically controlled with a forced draft ventilation system. A gas furnace to heat the air in the winter and an evaporative cooler to cool the air in the summer function when necessary to keep temperatures within the 40-90° range.

Dr. Thayer and Dr. West pointed out that the temperature control system will eliminate temperature extremes so that a better job can be done in getting precise, basic information under normal conditions. Temperature control will give the experimental rations — and some of them seem ridiculous, says Dr. West —a full chance to see what they can do.

The house has a concrete floor, with sloping gutters under the cages and a system using water to carry the droppings out and into the house's own sewer system.

The new cage house is located on the college's new poultry farm, which will consist of 29 acres and 19 buildings providing 51,000 sq. ft. of house space. The poultry department is now in the process of moving the farm from its old site, which is giving way to new college buildings, to the new site. Five of nine new poultry buildings planned for the new farm have been built. Ten of the best buildings from the old farm are being moved to the new site to provide additional facilities.

Dr. West said the department plans to build up all phases of its research program, including breeding, management and poultry products technology as well as feeding.

Concentrate on Layers, Turkeys

He said that some of greatest poultry research needs are in market egg and turkey production — and these things also are most important to Oklahoma's poultry industry. For that reason, research will concentrate on laying hens and turkeys.

In conducting the research, a team approach—functioning in commodity groups such as committees for eggs and turkeys — is used. Cooperating with the poultry department people in various studies are other college experts in such fields as biochemistry, agricultural economics, engineering, veterinary medicine, home economics, physics, mathematics and endocrinology.

Such an approach, said Dr. West, can lead to more progress and more valuable research results.

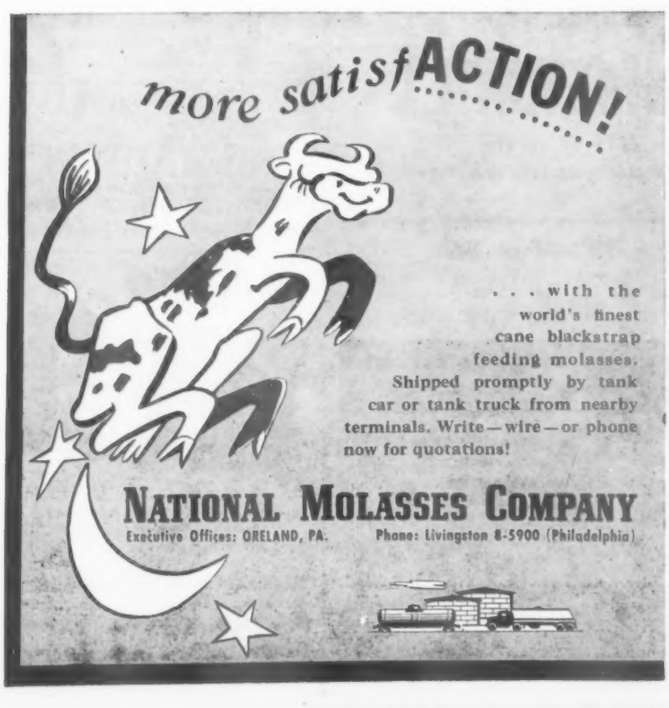
He didn't say as much, but maybe it was a team that helped convince the dean of the need for the cream cans that will be one of the tools in the search for rations that will yield a dozen eggs on 2 lb., and do it more profitably for producers.

New Dealers

FAIRBURY, ILL.—Five dealers in Ohio, Minnesota and Iowa have announced that their firms will handle the complete line of products manufactured by Honeggers' & Co., Inc., Fairbury. This includes livestock and poultry feeds, Honegger layers and farm buildings and equipment. The dealers are Jutte Feed & Implement Service, Celina, Ohio; Ft. Loramie (Ohio) Mills; Ostermann Produce, Elmore, Minn.; Brown Feed & Supply, New Hampton, Iowa, and Hurd's Feed and Supply, Clarksville, Iowa.

NEW MANAGER NAMED

TOPPENISH, WASH. — Frank Maruska is the new manager of the United Farmers Cooperative at Toppenish. He succeeds Roy Hamilton, who recently resigned to accept a position at the Monroe, Wash., reformatory.


more satisfACTION!
. . . with the world's finest cane blackstrap feeding molasses. Shipped promptly by tank car or tank truck from nearby terminals. Write—wire—or phone now for quotations!
NATIONAL MOLASSES COMPANY
Executive Offices: ORELAND, PA.
Phone: Livingston 8-5900 (Philadelphia)

ADVERTISEMENT

Feed for Thought

By Dr. H. S. Wilgus

LIMITATIONS ON RESTRICTION

Ample evidence indicates apparent benefits from restricted feeding. Classical is McCay's work at Cornell years ago demonstrating lengthened life span of rats restricted in feed intake. O. B. Kent of poultry fame was a life-long proponent of restricted feeding for rearing pullets. The limited feeding of gilts and sows is well established by research and practice. European and domestic research indicates that productive life of dairy cattle is decreased by excessive feeding during growth. Controlled feeding of sheep for top reproduction is common.

Research on nutritional requirements in the developmental period between early growth and sexual maturity in all species is inadequate for building sound rations and feeding practices. Yet interest grows in self-restricting rations for chickens, turkeys and swine. Such feeds could consist of a conventional growing ration mixed with 20-50% of bulky, fibrous, nutritionally inert material (hulls, cobs, hay, straw). These rations help to spare skilled labor required in hand-restriction and to avoid difficulties due to unappeased appetites and inadequate feeding space.

The cost of using complete self-restricting rations may be high. The inert material must bear grinding costs and other manufacturing and sales charges. (Pelleting defeats the purpose by reducing bulk.) Consumption per animal may exceed 150% that of a high-energy ration. Hiring skilled husbandmen to hand-feed high energy feeds properly (and to provide better overall management) may be more economical.

Custom-mixing a special commercial supplement with local grain and fibrous material to make the rations may reduce their costs. Providing a high-energy feed or supplement at given rates per 100 animals daily with or without some whole grain, and with adequate roughage (forage, hay, silage, pelleted roughage) available constantly as "filler" still looks least costly.

Nutritional restrictions can avoid fatness but can delay sexual maturity or influence subsequent reproduction within limits. Breeding sets the pattern and the potentials. Neither substitutes for good husbandry.

Research is sorely needed on nutrient requirements in this portion of the life cycle, especially relative influence on subsequent reproductive performance.

The results may enable us eventually to feed high-energy rations without restriction throughout the life cycle of non-ruminants, achieving maximum performance at least cost. Meanwhile, proceed with caution and clear thinking.

D. H. Wilgus

VICE PRESIDENT AND DIRECTOR OF RESEARCH, PETER HAND FOUNDATION

Peter Hand

PETER HAND FOUNDATION

A division of

PETER HAND BREWERY CO.

1000 NORTH AVENUE • CHICAGO 22, ILLINOIS

Caged Layer Management Gets Study At Annual Texas A&M Cage Clinic

COLLEGE STATION, TEXAS — "Good health, which is very important in caged layer management, is not just born in the bird," Joe Hertel, farm advisor from San Bernardino, Cal., told 540 participants in the recent Cage Clinic at Texas A&M College.

"High production demands good vitality. Higher-energy feeds, particularly in cold weather, are a must," he said. "We feed and recommend milo (sorghum) rather extensively."

Mr. Hertel was speaking during the mid-morning session in what has consistently proved to be a hard-hitting, information-packed program. Condensed to one day in length, the program offers some of the best-known authorities in the country on the various problems facing cage operators in the egg-producing business.

Mr. Hertel opened his first talk with a description of cage operations in California. There, he said, egg producers started working with 12-in. cages, dropped to 10-in., 8-in. and even narrower. Now, he said, the trend is the other way, with 24-in. cages and up to five or six birds in each.

In 1957, he said, there were almost 5 million birds in cages in California, with an average income of $1.35 per bird.

For a cage operation to be profitable, he said, one must have these things: A good volume of production per animal; production at an efficient cost-price ratio; a quality product, and an efficient marketing organization.

Volume, not only per animal, but also in the number of animals which one man can handle, is essential. However, more important than the number of birds per cage is the question: When do the birds peak in production? He suggested that controlled light on pullets means later maturity and longer peaks of production.

Other topics and speakers, by order of appearance, were as follows:

Egg Production Progress: Wesley Ballman, Burrus Feed Mills, Ft. Worth, Texas, served as morning chairman, and told the group of progress in egg production since 1930. At that time, it took 7.8 lb. feed to produce a dozen eggs, he said. By contrast, 1955 saw this ratio drop to 5.3 lb. feed per dozen eggs.

Average production in 1930 was 128 eggs per hen-year, but now the average rate is 190 per hen-year. In the past 15 years the average weight per hen has dropped from 5½ to 4½ lb. This means less hen to maintain for the same egg production capacity.

Texas cage figures have risen from 272,000 in 1953 to 2,406,000 in 1957, he said.

Egg consumption per capita in this country has dropped from 402 to 347, he said, and he blamed, among other things, the fact that eggs frequently are erroneously blamed in health problems.

Another contributing factor, he said, has been the "failure of the egg industry to defend, promote and advertise the nutrition value of eggs." He cited increases in per capita consumption of other food products, and said that a National Egg Council is the answer to the promotion problem.

College Responsibility: Gen. Earl Rudder, vice president for Texas A&M, welcomed the group. He said the college's four-part responsibility to the $175 million egg industry consists of training youth for service in the industry, research work, extension work and mass improvement of poultry through the national poultry improvement plans, including turkeys, broilers and the random sample test operation.

He said poultry and egg production is fourth among income-producing agricultural products in the state. He also pointed out that Texas has 5% of the nation's population, 6% of its turkeys and 7% of its broilers. Why

(Turn to CAGE CLINIC, page 89)

OVERTIME PANEL—This panel of speakers was kept an hour overtime by questions from participants in the Cage Clinic at Texas A&M. Conference Chairman Ben Wormeli, extension poultry husbandman, is at the microphone, and Dr. J. H. Quisenberry, head of the poultry science department, sorts cards with questions, at right. Seated, from left, are Courtney Allen, Hy-Line Poultry Farms, Des Moines, Iowa; Dr. L. C. Grumbles, head, department of veterinary microbiology at Texas A&M; Joe Hertel, farm advisor from San Bernardino, Cal.; L. E. Deacon, B&D Mills, Grapevine, Texas; Dr. J. R. Couch, poultry science and biochemistry and nutrition department, Texas A&M; N. J. Robnett, Robnett Poultry Farms, Lubbock, Texas.

For High Volume . . .
Consistent High Quality . . .
Economical, Trouble-free Performance . . .
Long Life

THE JAY BEE MODEL W
"Texture Grind"* HAMMERMILL

With Separate MOTOR DRIVEN FAN (ALL the power of the mill motor goes into grinding)

50 to 200 HP—Feed Opening 15½" x 12" to 26" x 12"—Flat Belt, V Belt, or Direct Motor Drive

The rugged, heavy duty Jay Bee Model W is built to produce—and keep on producing. Owners and operators throughout the United States and in foreign countries attest to its consistent high-volume, high-quality performance — many Jay Bee mills have been in continuous operation for more than 30 years.

*Texture Grind: Horsepower for horsepower, screen for screen, a Jay Bee will produce a finer, more uniform texture of grind than any other hammermill made.

J. B. SEDBERRY, Inc., Franklin, Tenn.

Mail this coupon today—and find out what the Jay Bee Model W can do for you.

J. B. SEDBERRY, Inc.
Dept. F, Franklin, Tenn.
Please send me full details about the Jay Bee Model W Hammermill.

Name .....
Company .....
City ..... Zone .... State .....

INEXPENSIVE VITAMINS A & D
DEVOLKOD VITAMIN OILS (Fortified Cod Liver Oils)
DEVOLKOD NON-DEST. COD LIVER OIL USP
DEVOLD VITAMIN A & D FEEDING OILS
DEVOLD VITAMIN A OILS also
PEDER DEVOLD WHEAT GERM OIL
PEDER DEVOLD OIL COMPANY
417 Fifth Ave., New York 16, N.Y.

MARCO
Special Steamed BONE MEAL
Minimum 70 BPL high in required minerals. Packed in paper-lined jute bags.
Call collect anytime for quotations — MA 6-2803
MARCO CHEMICAL COMPANY
P. O. BOX A • FORT WORTH 1, TEXAS

HERE'S PROOF!

In this folio are test data that offer *positive proof* that Borden's **FERMACTO 400** is truly one of the greatest advances in nutrition to come out of the Borden laboratories in many years.

A copy is waiting for you . . . to show you that Borden's **FERMACTO 400,** developed on the Borden test farms and proved by practical field tests, will help you build feeds that promote better livability, faster growth and maximum feed efficiency . . . *and at lower cost.*

Get the full story from your Borden representative or write today for your copy of the **FERMACTO 400** folio. It will come to you promptly by return mail.

BETTER FEEDS THROUGH RESEARCH

THE Borden COMPANY
FEED SUPPLEMENTS DEPARTMENT
350 Madison Avenue, New York 17, N. Y.
LABORATORIES AND TEST FARMS, ELGIN, ILL.

CONVENTION CALENDAR

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear ahead of the ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

• • •

Aug. 22—Purdue Swine Day; Purdue University, Lafayette, Ind.; chm., J. H. Conrad, Animal Husbandry Department.

Oct. 23-24 — Iowa Seed Dealers Assn.; Hotel Fort Des Moines, Des Moines, Iowa; sec., Bob Skinner, 928 Des Moines Bldg., Des Moines, Iowa.

Nov. 23-25—Western Grain & Feed Assn.; Hotel Fort Des Moines, Des Moines, Iowa; sec., Bob Skinner, 928 Des Moines Bldg., Des Moines, Iowa.

• • •

April 20-21-22—Nebraska Grain & Feed Dealers Assn.; Hotel Cornhusker, Lincoln; sec., Howard W. Elm, Trust Bldg., Lincoln, Neb.

April 20-23—National Fisheries Institute; Sheraton Palace Hotel, San Francisco, Calif.; chm., Mal Xavier, 1614 20th Street N.W., Washington 9, D.C.

April 23-24—Texas Feed Manufacturers Assn., Baker Hotel, Dallas, Texas; sec., Ben E. Schmitt, 528 Bewley Bldg., Ft. Worth, Texas.

April 24 — Arkansas Sheep Study Day; University of Arkansas, Agricultural Experiment Station, Fayetteville, Ark.; chm., Dr. P. R. Noland, University of Arkansas.

CALENDAR FOR 1958-59

APRIL						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MAY						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SEPTEMBER						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

OCTOBER						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

NOVEMBER						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

DECEMBER						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

JANUARY						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

MARCH						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April 25—Indiana Cattle Feeders Day; Purdue University, Lafayette, Ind.; chm., Dr. W. M. Beeson, Department of Animal Husbandry.

April 25—Beef Cattle Day; Washington State College, Pullman; chm., Dr. I. A. Dyer, Department of Animal Science.

April 25-26—Texas Grain & Feed Dealers Assn.; Baker Hotel, Dallas, Texas; sec., Ben M. Ferguson, 614 Meacham Bldg., Ft. Worth, Texas.

April 28-30—Animal Health Institute; Shoreham Hotel, Washington; exec. sec., D. L. Bruner, 540 Des Moines Bldg., Des Moines 9, Iowa.

May 1-3 — Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., O. E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

May 2 — Georgia Broiler School; University of Georgia, College of Agriculture, Athens, Ga.; chm., James E. Murphy, University of Georgia.

May 4-5—Missouri Grain, Feed & Seed Assn.; Hotel Governor, Jefferson City, Mo.; sec., D. A. Meinershagen, Higginsville, Mo.

May 4-6 — National Cottonseed Products Assn.; Atlanta Biltmore Hotel, Atlanta, Ga.; sec., John F. Moloney, P.O. Box 5736, Memphis 4, Tenn.

May 7 — North Carolina Grain Dealers Assn.; Sir Walter Hotel, Raleigh, N.C.; pres., C. L. Revelle, Jr., Chas. L. Revelle & Sons, Murfreesboro, N.C.

May 11-16—Grain Elevator & Processing Superintendents; Hotel Pick-Nicollet, Minneapolis, Minn.; sec., Dean M. Clark, 1115 Board of Trade Building, Chicago 6, Ill.

May 18-20—Grain Processing Machinery Manufacturers Assn.; Hotel Sherman, Chicago, Ill.; sec., Raymond J. Walter, 551 Fifth Ave., New York 17, N.Y.

May 19—Des Moines Feed & Grain Club Field Day; Des Moines Golf & Country Club; chm., Bill Rogerson, 1901 E. Euclid Ave., Des Moines 13, Iowa.

May 21-23—American Feed Manufacturers Assn.; Morrison Hotel, Chicago; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 4, Ill.

June 1-3—Indiana Grain & Feed Dealers Assn., mid-summer convention; French Lick-Sheraton Hotel, French Lick, Ind.; exec. sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis, Ind.

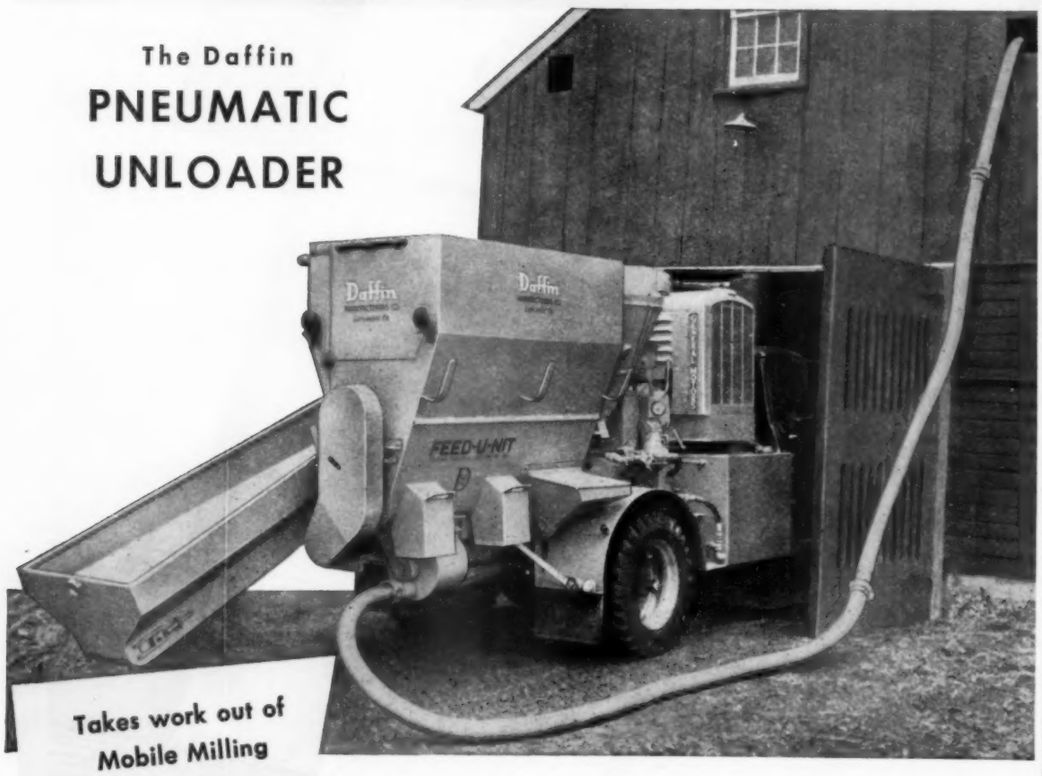
June 2-3 — Central Retail Feed Assn., Inc.; Hotel Schroeder, Milwaukee, Wis.; sec., Eldon H. Roesler, 1712 W. St. Paul Ave., Milwaukee, Wis.

June 8-10—Eastern Federation of Feed Merchants; Whiteface Inn,

(Continued on page 23)

Another Daffin "First"!

The Daffin
PNEUMATIC
UNLOADER



Takes work out of Mobile Milling

NOW . . . You can easily AIR-LIFT Daffin processed feed into bins as high as 40 ft. above your Feedmobile!

Daffin announces another big work-saving feature to produce MORE PROFIT for Feedmobile owners! Now, with the new DAFFIN *PNEUMATIC UNLOADER SYSTEM*, Daffin-processed feeds can be piped directly into bins, hard-to-reach self-feeders, or overhead bulk storage tanks . . . wherever the farm customer stores it! What's more, the light-weight flexible metal unloading tube is easily placed in position by one man.

FITS ANY DAFFIN MOBILE FEED MILL

WRITE TODAY FOR DESCRIPTIVE FOLDER

Daffin MANUFACTURING COMPANY
BUILDERS OF THE FAMOUS DAFFIN PACKAGED FEED PLANTS

SERVICE PARTS DEPOTS: CANADA—Toronto GEORGIA—Perry ILLINOIS—Springfield INDIANA—Indianapolis IOWA—Cedar Rapids-Sioux City KENTUCKY—Shelbyville MICHIGAN—Detroit MISSOURI—North Kansas City NEW YORK—Syracuse NORTH CAROLINA—Laurinburg OHIO—Dayton PENNSYLVANIA—Lancaster TENNESSEE—Knoxville VIRGINIA—Lynchburg WISCONSIN—Oconomowoc

DAFFIN MANUFACTURING COMPANY, 3254 NORTH PRINCE STREET, LANCASTER, PENNSYLVANIA

Calcium Carbonate of Constant High Purity

TRIPLE CCC QUALITY PRODUCT

Calcium Carbonate Company

320 South 4th St., Quincy, Illinois
Box 409, Carthage, Missouri
325 W.O.W. Bldg., Omaha, Nebraska

only

ONE...

Eiffel Tower . . . Paris

only distillers feeds have GFF*

ONLY Paris has the Eiffel Tower and only Distillers Feeds have GFF* — Grain Fermentation Factors.

These natural growth factors are the result of yeast action in the distillation process.

In addition to GFF*, Distillers Feeds are rich in proteins, minerals, fats and all of the important B-vitamins so necessary to the fast, healthy growth of livestock and poultry.

Why not give your feeds more feed power and your customers greater performance and satisfaction. Get in touch with your favorite supplier now.

DISTILLERS' FEED RESEARCH COUNCIL

*GRAIN FERMENTATION FACTORS:
unknown growth factors found exclusively in Distillers Feeds.

Write for "Feed Formulations with Distillers Feeds". It's FREE!

DISTILLERS FEED RESEARCH COUNCIL

1232 Enquirer Building, Cincinnati, Ohio

James B. Beam Distilling Co., 65 East South Water St., Chicago 1, Ill. • Brown-Forman Distillers Corp., P. O. Box 1080, Louisville, Ky. • Double Springs Distillers, Inc., 70 Scollay Square, Boston 8, Mass. • Fleischmann Distilling Corp., 625 Madison Ave., New York 22, N. Y. • Glenmore Distilleries Co., P. O. Box 900, Louisville, Ky. • Grain Processing Corp., 1600 Oregon St., Muscatine, Ia. • Kentucky River Distillery, Inc., Brook & Eastern Parkway, Louisville 8, Ky. • Medley Distilling Co., P. O. Box 548, Owensboro, Ky. • Merchants Distilling Corp., 1 North La Salle St., Chicago, Ill. • Midwest Solvents Co., Inc., 1300 Main St., Atchison, Kan. • Mr. Boston Distiller, Inc., 1010 Massachusetts Ave., Boston 18, Mass. • National Distillers Products Co., Grain Products Sales, 99 Park Ave., New York 16, N. Y. • Schenley Distillers, Inc., 26 E. Sixth St., Cincinnati 2, Ohio • Jos. E. Seagram & Sons, Inc., 7th St. Road, Louisville, Ky. • Stitzel-Weller Distillery, Inc., Sta. D, Louisville, Ky. • Hiram Walker & Sons, Inc., Peoria 1, Ill.

Only Dr.

UN

does all

FEED PRODUCTS DIVISION
DR. SALSBURY'S LABORATORIES
Charles City, Iowa

Dr. SALSBURY'S

SALSBURY'S Unique New

ISTAT

this for your chick and growing feeds

- **PREVENTS COCCIDIOSIS**
- **PERMITS IMMUNITY**
- **STIMULATES GROWTH**
- **INCREASES FEED EFFICIENCY**
- **IMPROVES PIGMENTATION**

Exacting, controlled tests and conclusive field trials prove it, Dr. Salsbury's exclusive new coccidiostat UNISTAT... 3, 5-Dinitrobenzamide combined with Acetyl-(para-nitrophenyl)-sulfanilamide and time-proven 3-Nitro-4-hydroxyphenylarsonic Acid... does more than ordinary coccidiostats to help you formulate superior chick and growing feeds.

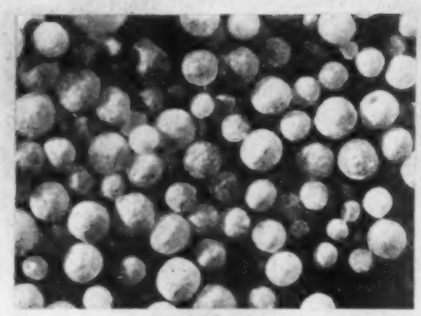
For UNISTAT is not only highly effective in preventing cecal and intestinal coccidiosis, it permits the development of immunity while significantly stimulating growth, increasing feed efficiency and providing better over-all development *that can be seen in improved pigmentation of shanks and skin.*

UNISTAT is palatable, easy to handle and compatible with all normal feed ingredients.

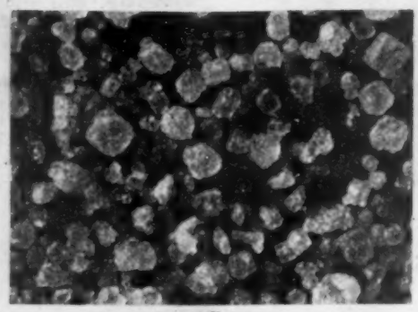
Meet more of the grower's needs and profit more with feeds containing UNISTAT. Write, wire or phone today for UNISTAT Feed Manufacturer's Guide.

nation-wide service to the feed industry

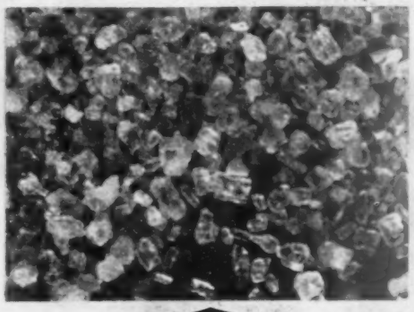
These Actual Photos Tell The Story...



Grace Micro-Prilled Urea Feed Compound — The smooth, round balls are free-flowing, non-caking



PRODUCT A



PRODUCT B

ALL 3 PHOTOS ARE 12 TIMES ACTUAL SIZE

Only Grace Urea Feed Compound

Assures

✓ **An Even, Uniform Mix Throughout**

✓ **Easy Blending In Any Standard Mixing Equipment**

because only Grace has

Micro Prilling *

* Micro-Prilling, an exclusive Grace process, produces a feed compound in the form of tiny balls that are truly free-flowing. Each ball is clay-coated to prevent caking.

SMOOTH • ROUND • FREE-FLOWING

Write for complete details.

Grace Chemical Company *A Division of W. R. Grace & Co.*

MEMPHIS—Edway Bldg., JAckson 7-1551 • CHICAGO—75 E. Wacker, FRanklin 2-6424

TAMPA—2808 S. MacDill Ave., 82-3531 • NEW YORK—3 Hanover Square, DIgby 4-1200

Whiteface, N.Y.; exec. dir., Austin W. Carpenter, Box 66, Sherburne, N.Y.

June 9-11—Association of Southern Feed & Fertilizer Control Officials; Heart of Atlanta Motel, Atlanta, Ga.; sec.-treas., Bruce Poundstone, University of Kentucky, Lexington, Ky.

June 10-12 — Alabama Poultry Industry Assn.; Auditorium, Birmingham, Ala.; exec. sec., W. L. Walsh, P.O. Box 567, Montgomery, Ala.

June 10-13—Northeastern Poultry Producers Council Egg Quality School; Rutgers University, New Brunswick, N.J.; chm., Alfred Van Wagenen, 10 Rutgers Place, Trenton 8, N.J.

June 16-18—American Association of Feed Microscopists, Chateau Laurier, Ottawa, Canada; sec., G. M. Barnhart, Missouri Department of Agriculture, Jefferson City, Mo.

June 16-18—Tri-State Hatchery & Field Agents School; Poultry Science Department, Purdue University, Lafayette, Ind.; chm., David D. Jackson, extension poultryman.

June 17-19—Western Poultry Congress; Santa Rosa, Cal.; sec., Willard A. Smith, P.O. Box 307, Baldwin Park, Cal.

June 19-20—Purdue Poultry Service & Salesmen's Clinic; Poultry Science Department, Purdue University, Lafayette, Ind.; chm., David D. Jackson, extension poultryman.

June 26-28 — Delmarva Chicken Festival; Denton, Md.; chm., John Asher, R.F.D. No. 2, Box 35-A, Georgetown, Del.

June 27-30—Canadian Feed Manufacturers Assn.; Murray Bay, Quebec; conv. sec., Rachel Beauchamp, 110 St. Paul Street, East, Montreal, Canada.

June 28-July 1—Georgia Feed Assn.; General Oglethorpe Hotel, Wilmington Island, Savannah, Ga.; sec.-treas., Will L. Kinard, 3240 Peachtree Rd. Bldg., Atlanta 5.

July 8-9—Cornell Poultrymen's Get-Together; Cornell University, Ithaca, N.Y.

July 18-19—Kansas Seed Dealers Assn., Hotel Broadview, Wichita, Kansas; sec., O. E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

July 22-25 — American Poultry & Hatchery Federation; Cleveland Auditorium (Ohio); convention mgr., Ed G. Gray, 521 E. 63rd St., Kansas City 10, Mo.

Aug. 8-9 — North Carolina Feed Manufacturers Assn.; Grove Park Inn, Asheville, N.C.; sec., A. W. Koon, Box 1664, Spartanburg, S.C.

August 18-19 — Kentucky Feed & Grain Assn.; Campbell House, Lexington, Ky.; sec., F. H. Schardt, 4325 Alicent Road, Louisville, Ky.

Sept. 7-8—Grain & Feed Dealers National Assn., Sheraton-Jefferson Hotel, St. Louis, Mo.; chm., Alvin E. Oliver, 600 Folger Bldg., Washington 5, D.C.

Sept. 7-9—Louisiana Poultry Improvement Assn.; Jung Hotel, New Orleans, La.; sec., Clyde Ingram, University Station, Baton Rouge, La.

Sept. 10-11 — Maryland Poultry Servicemens Conference; University of Maryland, College Park; chm., W. R. Rice, Poultry Department, University of Maryland.

Sept. 17-19—National Feed Ingredients Assn., Congress Hotel, Chicago, Ill.; sec., Peter W. Janss, 212 Equitable Bldg., Des Moines, Iowa.

Sept. 25-26 — Arkansas Formula Feed Conference; University of Arkansas, Fayetteville, Ark.; chm., Prof. E. L. Stephenson, Department of Animal Industry and Veterinary Science.

Oct. 7-9—Northeastern Poultry Producers Council Poultry Exposition and Convention; Farm Show Bldg., Harrisburg, Pa.; chm., Alfred Van Wagenen, NEPPCO, 10 Rutgers Place, Trenton 8, N.J.

Oct. 8-10—Texas Nutrition Conference; Texas Agricultural and Mechanical College; College Station, Texas; chm., J. R. Couch, Poultry Science Dept.

Oct. 14-16 — Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., L. E. Bopst, University of Maryland, College Park, Md.

Oct. 16-17 — Oklahoma Formula Feed Conference, Oklahoma State University, Stillwater, Okla.; chm., Dr. Rollin H. Thayer, Poultry Science Dept.

Oct. 20-21—California Animal Industry Conference, Fresno Memorial Auditorium, Fresno, Cal.; sponsored by University of California and California Hay, Grain & Feed Dealers Assn.; sec., John Gilmore, 1400 10th St., Sacramento, Cal.

Oct. 23-25—Nutrition Conference, Alabama Feed Assn.; Alabama Polytechnic Institute, Auburn, Ala.; chm., Merlin T. Bryant, Brundidge Milling Co., North Main St., Brundidge, Ala.

Nov. 2-5 — National Renderers Assn., Hotel Statler, Washington, D.C.; sec., Miss Jamie C. Fox, 30 N. La Salle St., Chicago 2, Ill.

Nov. 12-14—Midwest Feed Production School; American Royal Bldg., Kansas City; sponsored by Midwest Feed Manufacturers Assn.; exec. vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Nov. 13-14—Cornell Nutrition Conference; Hotel Statler, Buffalo, N.Y.; chm., Prof. Charles Chance, Wing Hall, Cornell University, Ithaca, N.Y.

Nov. 14—Midwest Custom Milling School; American Royal Bldg., Kansas City; sponsored by Midwest Feed Manufacturers Assn., exec. vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

1959

Jan. 26-28 — Southeastern Poultry & Egg Assn., Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Feb. 12-13 — Washington State Feed Assn.; Leopold Hotel, Bellingham; mgr., J. G. Wilson, 814 Second Ave. Bldg., Seattle, Wash.

Feb. 22-24—Colorado Grain, Mill & Feed Dealers Assn.; Shirley Savoy Hotel, Denver, Colo.; sec., R. B. Kelley, 714 Cooper Bldg., Denver 2, Colo.

March 1-3 — Ohio Grain & Feed Dealers Assn., Inc.; Neil House, Columbus, Ohio; sec., G. E. O'Brien, 710 N. Ohio Street, Greenville, Ohio.

March 11-13—Midwest Feed Manufacturers Assn.; Hotel Shamrock Hilton, Houston, Texas; exec. vice president, Lloyd S. Larson, 20 W. Ninth Street Bldg., Kansas City 5, Mo.

The Vitamin D Supermarket for the United States

The ONLY COMPLETE line of Vitamin D_2 and D_3 products with warehouse stocks available in any quantity, for IMMEDIATE shipment at a moment's notice.

PURE CRYSTALLINE (*USP*)

MINERAL STABLE (*D_2 and D_3 Dry Powders*)

WATER MISCIBLE (*Dry Powders in a milk base*)

OIL SOLUBLE (*Vegetable oil carriers*)

High or Low potency, refined or crudes, for every Food, Feed and Pharmaceutical use.

Protocols with all shipments—potency guaranteed.

All Vitamin D Products Manufactured by

N. V. PHILIPS-ROXANE, The Netherlands

The World's Largest Manufacturer of Vitamin D

DUPHAR® Trade Mark

Distributed by NORTH AMERICAN PHILIPS COMPANY, INC., *through*

CHARLES BOWMAN CO., 220 East 42nd St., New York 17, N.Y.

BOWMAN FEED PRODUCTS, Holland, Michigan

170 E. California Street, Pasadena 1, California 600 South Michigan, Chicago 5, Illinois

Arbor Acres

Make sure

Your broilers come from ARBOR ACRES females!

9 Egg Packing Plants Join Pennsylvania's Certification Program

HARRISBURG, PA. — Nine Pennsylvania egg packing plants have signed agreements to cooperate with the state department of agriculture in an egg certification program.

It is expected that the number will increase until it includes a large majority of the eggs cartoned in the state, according to a report by John L. Rainey, director of the Bureau of Markets, Pennsylvania Department of Agriculture.

Certified eggs will carry a keystone insigne on a sealing tape with the wording, "Pennsylvania Certified —Graded Under State Supervision."

The program is voluntary and applies only to those persons or organizations which wish both to classify eggs according to the official Pennsylvania egg standards and to identify them as having been certified, it was stated in Mr. Rainey's report, published in the Pennsylvania Poultry Federation's news bulletin.

The plan works similarly to the federal certification which has been in effect for a number of years. Mr. Rainey points out that the Pennsylvania emphasis will be an important first step in establishing a quality product upon which effective promotion can be achieved.

Under the direction of E. J. Lawless, Jr., Bureau of Markets, a licensed grader will be authorized in each plant and the grader's work will be closely supervised by state inspectors.

The certification plan will operate at no added expense to the state. Cooperating egg packing plants will pay fees to the state to cover the cost of the supervision. The special sealing tape will be obtainable from normal commercial channels at the packer's expense.

Mr. Rainey said the program was developed at the request of cooperative and private dealers who believe the certification will increase the demand for these eggs.

Applications from the following organizations have been approved: Keller's Egg Co., Telford; Hallman's Creamery, Souderton; Stauffer Farms, Red Hill; Tri-County Producers Cooperative, Worcester; Bucks County Producers Cooperative, Doylestown; J. E. Copenhaver, Elizabethtown; L. M. Sheaffer, Ephrata; Mark C. Hershey Poultry Farms, Lebanon; Lehigh Valley Egg Producers Cooperative Assn., Bethlehem.

FEED STORE SOLD

SENECA, KANSAS — The Seneca Produce, feed dealer, has been sold to Mr. and Mrs. Noel Young of Bern, Kansas, by Chris Sack, former owner.

Robert J. Thompson

SALES POSITION — The appointment of Robert J. Thompson as a sales representative for the Dura-Buket division of National Oats Co., East St. Louis, Ill., has been announced by R. T. Matthews, vice president of the firm. Mr. Thompson will be located at Kansas City and will handle sales of the firm's plastic elevator buckets in a territory between the Mississippi River and the Rocky Mountains. He formerly worked with Ralston Purina Co. and the Save Way Feed Mill, serving both firms in the purchasing and traffic departments. Mr. Thompson is a business administration graduate of Washington University.

Midwest Feed Film Designed for TV

KANSAS CITY—The new Midwest Feed Manufacturers Assn. film, "New Horizons in Feeds and Feeding," has been designed for more than occasional use at feed meetings, the association points out.

Scheduling the release date for about May 1, the association said the film is presented in an informal, professional style designed for ready acceptance by television stations all over the nation and to provide interesting and timely material for service clubs and farm meetings.

"New Horizons" is the second annual film produced by the association. "Progress in Nutrition," produced last year, had good acceptance, the announcement noted.

The film is in part a recording of the "New Horizons in Feeds and Feeding" panel discussion presented at the recent Midwest convention by experts from various fields who told of research progress in feeding.

Information on purchases or rental of the film may be obtained at Midwest Feed Manufacturers Assn., 20 W. 9th St. Bldg., Kansas City, Mo.

NOW - A NEW DRY MOLASSES FOR FARM FEEDING!

be the first to feature...

Natico DRY Feeding Cane MOLASSES Product

50 lbs. NET WEIGHT
Natico
DRY FEEDING CANE MOLASSES PRODUCT
THE NORTH AMERICAN TRADING AND IMPORT COMPANY
PHILADELPHIA 2, PA.
DRY FEEDING CANE MOLASSES PRODUCT

MORE THAN 48% SUGAR!

AVAILABLE FOR IMMEDIATE SHIPMENT!

WRITE TODAY FOR PROFIT MAKING FACTS ABOUT NATICO!

Remember, something wonderful happens when you add NATICO!

Pass the word along to your customers—*add* NATICO to feed; *subtract* dollars from feeding costs! NATICO is the new, dry all molasses product—*no carriers, no fillers*—with a guaranteed 48% sugar content that adds attractive color and fragrance to feed. Even makes dry, home-grown grains and roughages tasty. Packed in easy-to-handle 50-lb. bags, NATICO is economical to buy, profitable to sell.

FOR BEEF AND DAIRY CATTLE, SWINE, POULTRY

Natico

Product of THE NORTH AMERICAN TRADING & IMPORT COMPANY
World's Largest Importer of Cane Molasses
1429 WALNUT STREET • PHILADELPHIA 2, PA.

MIDWEST SALES AGENT—The North American Trading & Import Company, 101 Arsenal St., St. Louis, Missouri. Telephone: PRospect 6-0858

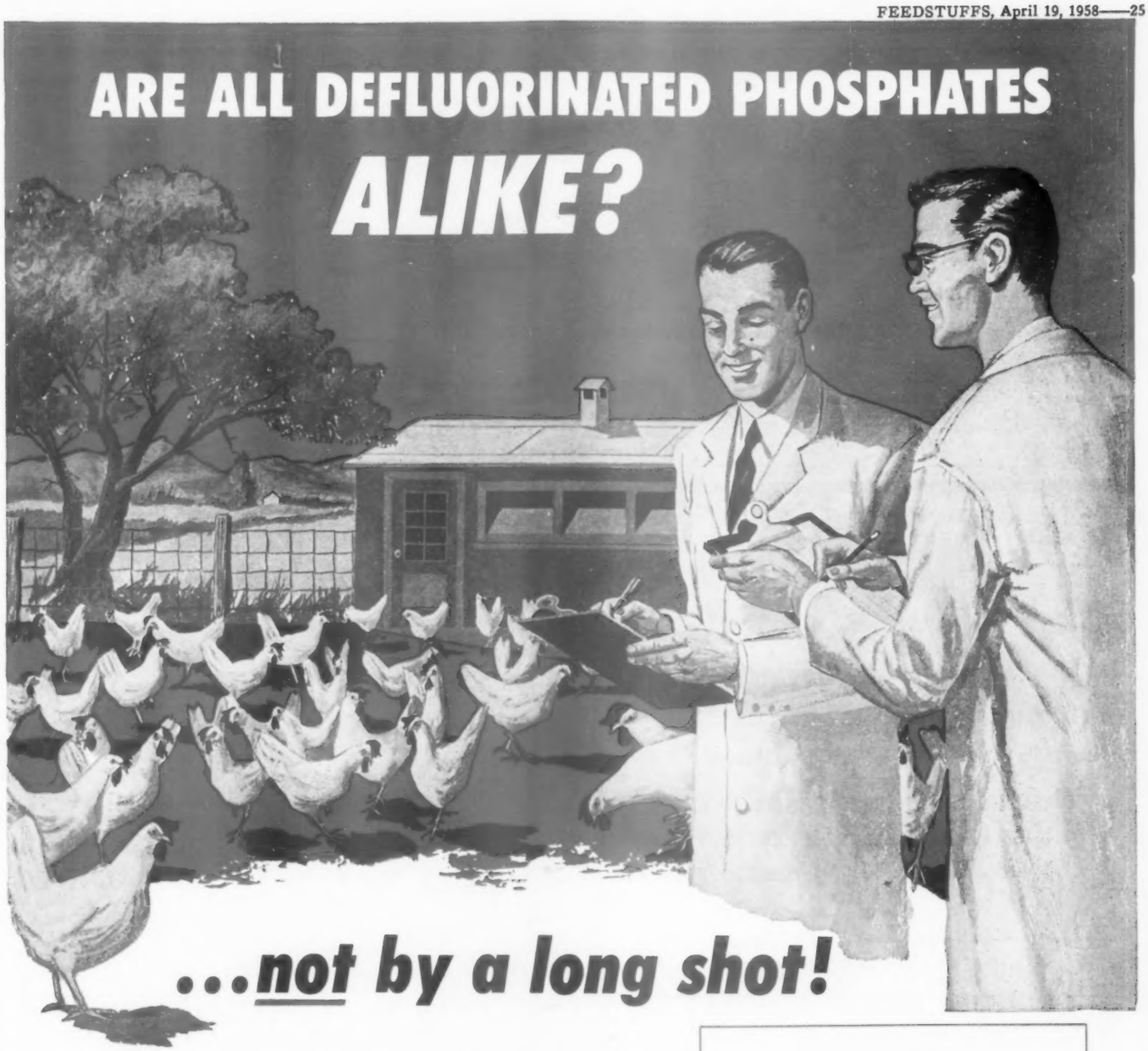
SW

FOR THE BEST IN FEED BLENDERS

SPROUT-WALDRON

MUNCY, PENNA.

ARE ALL DEFLUORINATED PHOSPHATES *ALIKE?*



...*not* by a long shot!

Nutritionally, CDP is a tried and tested* source of phosphorus, palatable to livestock even in free choice feeding. All of the phosphorus in CDP has demonstrated total biological availability to both plant (rumen bacterial micro-organisms) and animal life.

*Tested at state experiment stations and research laboratories not affiliated with Coronet.

Nutritional evidence establishing CDP as the *best* defluorinated phosphate is listed below. Literature available upon request.

1. "The Availability of Phosphorus from Different Sources for Poults Fed Purified Diets." *Poultry Science,* Volume XXXIII, Number 5, September, 1954.
2. "A Comparison of the Availability, to the Young Growing Chicken, of the Phosphorus in Defluorinated Phosphate and Analyfical Reagent Grade Dicalcium Phosphate," by Lime Crest Research Laboratory, October, 1954.
3. "The Availability of Phosphorus from Different Sources for Poults Fed Practical-type Diets," *Poultry Science,* Volume XXXIV, Number 5, September, 1955.
4. "Phosphorus Availabilities as Determined by New Feeding Experiment," by Lime Crest Research Laboratory, November, 1955.
5. "Phosphorus Availability Assays by the University of Illinois (as presented by Dr. H. M. Scott) Method," by the Laboratory of Vitamin Technology, Inc., September, 1956.

Read what a leading nutritionist says about phosphorus availabilities:

"The feed nutritionist should be aware that the phosphorus in all phosphorus supplements is not available. The phosphorus supplier should be required to provide data concerning the availability of phosphorus in the supplement. Phosphorus supplements available to the feed trade may range from as low as 23% to as high as 92%. Thus the importance of phosphorus availability is immediately apparent."

Dr. J. R. Couch, *Formulation of Feeds for Laying Hens,* Feedstuffs, *July 27, 1957, pp. 18-24*

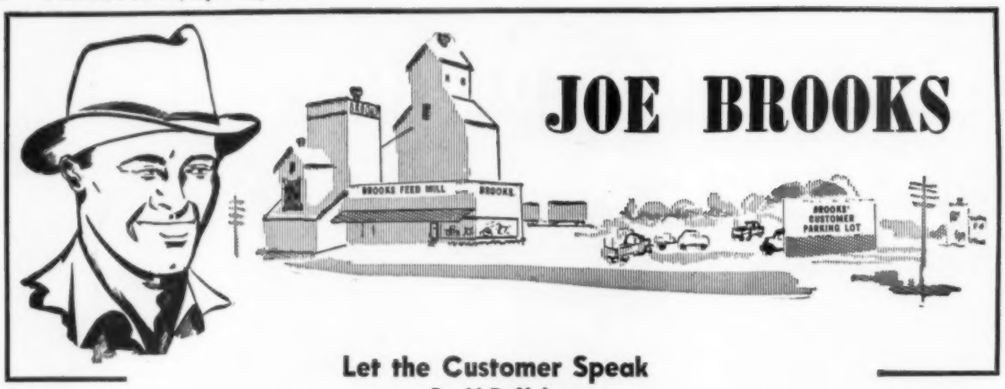
LET US FIGURE THE COST OF CDP DELIVERED TO YOUR PLANT

CDP CORONET DEFLUORINATED PHOSPHATE

Coronet Phosphate Company

NORFOLK 1, VIRGINIA

A DIVISION OF SMITH-DOUGLASS COMPANY, INCORPORATED SD SMITH-DOUGLASS



Let the Customer Speak

By Al P. Nelson

Emory Thomsen came in from the mailbox and threw a stack of newspapers and letters on the table.

"It's kind of nippy this morning," he said, rubbing his hands. "Got some warm coffee, Ma?"

"Sure, Emory," said his buxom wife. She poured the coffee and at the same time looked down at the stack of mail.

"Hey, don't scald me!" exclaimed her husband irritably.

"Oh, excuse me, dear, I was just glancing at the mail. Anything interestin' in it?"

"Naw," replied her husband disgustedly. "Just a bunch of bills and loads of direct mail. Those are two things a farmer kin always expect to get. If we bought all the stuff that comes through the mail, the U.S. treasury would have to bail us out. What do those guys think that send us this junk—that we've got a bulk milk tank full of money?"

Mrs. Thomsen put the coffee pot back on the stove and began going through the mail systematically. "Oh, here's a free soap deal," she said. "I must go to Centerville Corners Grocery and get the extra bar, if I buy four."

"You got a whole medicine cabinet full of extra soap now!" complained her husband. "When I took my razor out this mornin' the whole darn lot tumbled into the washbowl."

"Oh, you have to watch bargains like that these days," Mrs. Thomsen stated firmly. "You know, it always pays to save."

Emory Thomsen merely grunted.

"Oh, and here's a questionnaire from Joe Brooks!" she cried. "He wants us to answer 10 questions about his feed business and service."

"Well, I can answer that one right now," grumbled Emory. "All feed costs too much, and the farmer doesn't get enough for what he produces. So—he comes out on the short end all the time. Let him try to answer that."

"Oh, Emory, I don't know what makes you so ornery today. You know we are eatin' regularly. And we bought a new tractor last year and you're thinkin' of buying a new car this spring. If we don't make money, if feed costs too much, why kin we do this buyin'?"

Her husband flushed. "We kin do it because we work hard, that's why, not on account of the feed."

"Oh, it will take only a little while to answer this questionnaire," said his wife. "Maybe we can figure it out tonight, after the Lawrence Welk show on TV. Joe'll give 'Pa a Rain Gauge and Ma 10 Chicks' he says."

Emory Still Displeased

"I got a rain gauge," Emory came back quickly.

"But you can use another one out on the south forty," his wife said, practically, "and I'll get 10 free chicks."

"You fall for all that stuff," grumbled her husband.

"Like you, for instance," said his wife sharply. "Was that a bum deal for me, too?"

Emory chuckled. "Doggone it, Ma, don't rub it in. But I ain't got time to monkey around with a pencil on that questionnaire. I'm a busy man. All the spring work is ahead of me."

"Then I'll fill it out," she said. "I want those free chicks. And you'd better listen while I read these questions. You don't want me to put in the wrong thing, do you?"

Emory knew he was hooked, so he listened while his wife read:

"Is our service satisfactory? If not, please state why . . .

"Is there anything else you feel we can do to help you?

"Is our stock of farm supply items varied enough to fill your needs?

"What additional items should we stock?

"Are you served quickly enough at our grinding and mixing department? Have you any improvements to suggest?

"Do you like our mobile milling unit service? Can you suggest any improvements?

"Do we hold enough feeder meetings? Any suggestions?

"Do you read our monthly mimeograph bulletin? Our newspaper ads? Any suggestions for improvements?

"Do you want us to come to your farm for a nice long visit to review your feeding program? (We'll bring coffee in a thermos for two and some fresh doughnuts, so we can sit on a bale of hay in the barn and talk, if you like.)"

"Huh," growled Emory, "Joe knows darn well if he shows up on a farm, he'll get invited to coffee and maybe lunch. Who ever heard of a feed dealer bringing his own coffee and doughnuts on a farm visit?"

"Well, it's very nice of him to offer," Mrs. Thomsen declared. "Shows he doesn't want to sponge on any one. Emory, why don't you invite Joe out for one of those long talks about your feeding program?"

"Who, me?"

Emory Gets a Challenge

"Yes, you. You've been complaining for months about the milk production and my laying flock record. You always say that Joe is so busy when you go to the mill to get grain ground and mixed, you don't have time enough to get him to review your whole program thoroughly. Now, he offers to come out here and stay a long time. You can have him all to yourself. This is what you've been asking for. And you can set an appointment, too."

Emory thought for a few minutes. "Yea, maybe I'd better," he said. "I'm busy, but never too busy to have a real feed program worked out. There's no use goin' on the way I been doing. I might as well milk Joe of all the advice he can give me. Maybe it'll help me. Let's fill out the doggone questionnaire tonight and send it in. But tell him to heck with that rain gauge. I just don't want another. But I could use a package of Nigger Hair. I like that tobacco."

"I'll write that down on the questionnaire," Mrs. Thomsen said. "And if I know Joe Brooks I'll bet he'll bring it along instead of the rain gauge."

Yes!

He's looking for some of your dog food made with our complete dog food cereals

★ TOASTED CORN FLAKES ★ KIBBLED CORN
★ TOASTED WHEAT FLAKES ★ KIBBLED WHEAT
★ CORN GRANULES ★ KIBBLED PREMIXES

(Straight or Mixed Shipments)

Carloads — Truckloads — LCL — LTL

LAUHOFF GRAIN COMPANY

PHONE 1800 — *Cereals of Quality Since 1862* — Danville, Illinois — TELETYPE 8261

MAKE MORE MONEY ...WITH LESS WORK!

B&L THE COMPLETE FEED PROCESSING PLANT ON WHEELS!

GRIND, MIX AND BLEND ANY FEED
COMPLETE "BARN-DOOR" SERVICE

- ONE MOTOR
- 4-SPEED HAMMERMILL
- PRE-BLENDER
- 112 CU. FT. MIXER
- SUPPLEMENT COMPARTMENT
- MOLASSES

Plus: Unmatched maneuverability and ease of operation

GET THE COMPLETE STORY... on the Industry's Most Modern Portable High-Speed Grinding, Mixing and Blending Equipment. Compare before you buy. Write for literature on the B&L Portable Formula Feed Blender

BACKED BY MORE THAN 100 YEARS EXPERIENCE IN FEED AND GRAIN PROCESSING MACHINERY

B&L BARNARD & LEAS *Manufacturing Company* INC.

1219 Twelfth Street, S.W. — Cedar Rapids, Iowa

"If I were only 25 years younger..."

"Yes, don't we all wish it. But just think of the opportunity ahead for today's young folks. The way this country's growing and booming . . . all the new things being invented . . . the new jobs opening up . . . why, I'd give anything to be just starting out again!

"And you know where I think the *real* opportunity is? Right here—on this land, on this farm.

"Now, I'll grant that farming is going to require a man to stay on his toes like he never has before. Improvements are coming to farming, just like they are to everything. And it makes sense that farming methods will have to improve, too, if we're to do the job ahead on land already under cultivation.

"To be a good farmer, it'll mean a man will have to keep up with changes. New ideas. Better ways of doing things. And he'll have to be an even smarter business man than he is today.

"You know, I remember my dad telling me about my future in staying with this farm. He was sure right. Things have followed the same pattern since then that they will in the future. In some ways, farming's a lot easier now than it used to be. But in other ways, it's a much bigger challenge. That's why you just can't run a farm on any kind of "city hours". It's the *extra* time and work that enables you to make money in farming. I don't mind it, though. It's a great feeling to run your own business. And I wouldn't trade farming for any other life.

"I wonder about my boy. Roy's just 12 now . . . and he lives pretty much for the present. He's got good sense, though . . . makes a lot of his own decisions already. And I think once Roy grows up and gets serious about a career, he's going to like what he sees ahead for himself right here.

"For one thing, he will already have had about ten good years of farming experience. And then, when you consider how big the population will be when Roy's grown up . . . there's going to be millions of extra mouths to feed. Industry will be wanting more and more farm crops, too.

"Yes, I'd say if a young man is really looking ahead—and he prepares himself well, both with schooling and practical experience—he'll see the future in farming is well worth being in on.

"*I'm counting on a share in it myself.*"

As people who have worked closely with the farmer for 93 years, we at Cargill agree: the future looks bright.

Our business is Creative Processing: helping change raw farm products into things people will need and buy. This is why we're confident—with a predicted U.S. population of 220 million by 1975 (and a world population of nearly 3 billion)—Cargill Creative Processing will be wanting an ever-increasing number of crops from you, your children and *their* children.

This helps your farming business keep in step with a growing and hungry America . . . makes our position as No. 2 man on the farmer-processor team more stimulating than ever before.

93 Years of Creative Processing of Farm Products

CARGILL

For free reprints, suitable for framing, write **Cargill, Inc.**, *200 Grain Exchange, Minneapolis 15, Minnesota*

HELP EASE THE SQUEEZE IN

50 lbs. List 4385

OMAFAC

SQUIBB

Dried Extracted Penicillin and Streptomycin Meal and Fermentation Solubles with Streptomycin Sulfate

GUARANTEED ANALYSIS:

Streptomycin activity as free base not less than 1.2 Gm. per lb. (equivalent to 1.5 Gm. streptomycin sulefate)

Crude Protein . .	Not less than 23%
Crude Fat	Not less than 0.8%
Crude Fiber . . .	Not more than 9.0%
N. F. E.	Not less than 27%

GUARANTEED ANALYSIS ON OMAFAC LABEL

Every 50-lb. multiwall bag of Omafac is clearly labeled with the percentage of streptomycin, protein, fat, fiber and N.F.E. Your job is made easier—you formulate a superior, more economical ration.

For use as an antibiotic and growth factor supplement in animal feeds only

"Omafac" is a Squibb trademark ®

E·R·SQUIBB & SONS, NEW YORK

DIVISION OF OLIN MATHIESON CHEMICAL CORPORATION

Made in U.S.A.

BROILER GROWING PROFITS with OMAFAC*

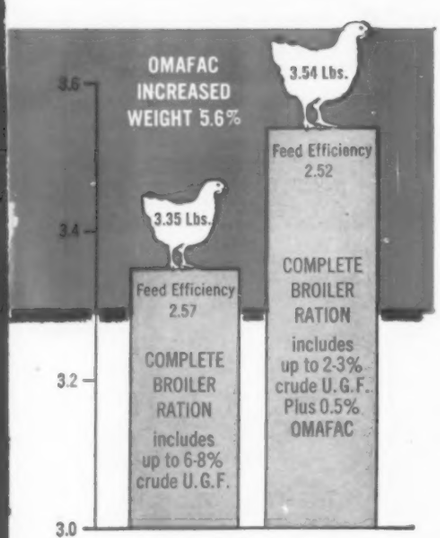
SQUIBB

ONLY 0.5% OF OMAFAC

- improves feed conversion
- accelerates growth
- reduces your cost per ton

PROBLEM: How can you help broiler growers "ease the squeeze" between operating costs and selling price?

SOLUTION: When you formulate broiler rations, choose Omafac to replace a larger quantity of crude Unknown Growth Factor supplements at less cost. Only 0.5% of Omafac will replace 4% to 5% of fish solubles, dried whey, fish meal, distiller's solubles, dried yeast, etc. Growth and feed efficiency are remarkably improved. Antibiotic content of your ration is increased by 15 gm. per ton (streptomycin sulfate) at the 0.5% level. An additional plus factor is Omafac's uniformly high Vitamin B_{12} content. YOU GET A MORE EFFICIENT RATION AT A SIGNIFICANTLY LOWER COST PER TON.



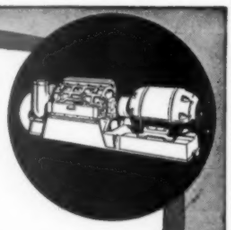
Produced by Squibb from dried penicillin and streptomycin residues, Omafac is always in dependable year-round supply. For 26-page brochure containing full facts, results of field trials, etc., write:

Chemicals Sales Department
E. R. SQUIBB & SONS
Division of Olin Mathieson Chemical Corporation
745 Fifth Avenue, New York 22, N. Y.

© OLIN MATHIESON CHEMICAL CORPORATION, 1958

*OMAFAC is a Squibb trademark.

SQUIBB A NAME YOU CAN TRUST



HAMMERMILLS, FEEDERS, MIXERS, MAGNETIC SEPARATORS, ETC.

Serving the feed industry for 47 continuous years. Ask your Jacobson representative.

Jacobson MACHINE WORKS

1090 TENTH AVE. S.E. Dept. M
MINNEAPOLIS 14, MINN.

Your Feed Requirements

C. J. MARTENIS GRAIN CO.

44 Whitehall Street
NEW YORK 4, N.Y.
Phone:
Bowling Green 9-4447

Bran and Middlings
Dried Brewers' Grains
Citrus Pulp
Cottonseed Meal

Distillers' Grain
Old Process Oil Meal
Soybean Meal
Beet Pulp

FOR

WELL-BALANCED NUTRITIVE FEEDS

MIX PRODULAC
CORN DISTILLERS SOLUBLES WITH GRAINS

BOTH GRAIN FERMENTATION PRODUCTS

NADRISOL
CORN DISTILLERS DRIED SOLUBLES

These economy fortifiers are rich in proteins, vegetable fats, and highly nutritious. They also contain essential Vitamin B-G Complex factors, as well as unidentified growth factors. Mixing Nadrisol or Produlac in your formula feeds will promote quicker growth, greater meat and egg yield and will produce feeds your customers want to buy. It's a good way to gain and hold customer acceptance.

Sold only to manufacturers of formula feeds.

NATIONAL DISTILLERS PRODUCTS COMPANY
GRAIN PRODUCTS SALES
99 PARK AVENUE, NEW YORK 16, N.Y.

Attention Focused on New Feed Technology Developments

Attention was focused recently on a number of advances during the past year or so in feed technology, including both nutrition and feed production.

Robert Wornick of the agricultural research and development department of Chas. Pfizer & Co., Inc., at Terre Haute, Ind., prepared an extensive review and summary of various developments in such things as feed additive research, pelleting research, feed mixing research and liquid feed supplements.

The review—presented at a meeting in Buffalo of the Niagara Frontier Section of the American Association of Cereal Chemists—represents a summary of information on some of the newest developments.

Following are condensations of just a few of the sections of Mr. Wornick's paper, including information on tranquilizers, new antibiotics, pelleting high-roughage rations and liquid feed supplements:

Tranquilizers: These compounds have attracted considerable attention since their introduction into human medicine just a few years ago. Two possible avenues of use with livestock and poultry were projected: (1) Actual sedation of wild or nervous animals or birds. (2) Possible nutritional effects without sedation via the feed.

Both oral and parenteral uses were predicted under the first category. Potential applications included high-strung layers, pheasants and other game birds raised in captivity, feeder calves coming into enclosed feedlots from open range, cattle being shipped to market and held prior to slaughter, nervous pets, bulls and stallions, etc. Possible effects from low-level feeding in the second category were completely unknown.

One of the first products studied was the ground whole root of the Rauwolfia genus. Products of this plant were tested. Since the ground root preparations varied in activity, one of the alkaloid components, reserpine, was extracted and fed in pure form. Because of the cost and limited availability of pure reserpine, as well as variation in activity of ground root preparations, a search was initiated for an effective synthetic product. This resulted in selection of hydroxyzine.

Initial studies were begun by feeding graded levels in the ration to chicks to measure growth effects. While the responses to date have not been outstanding, there was enough promise to warrant additional trials. The results with swine were comparable to those with poultry.

The most promising results to date have been obtained by feeding low levels of tranquilizers to ruminants. Minute levels have elicited pronounced growth responses and improvements in feed conversion. Such results have been obtained without visible sedation effects. The responses are over and above stimulation afforded by antibiotics and stilbestrol.

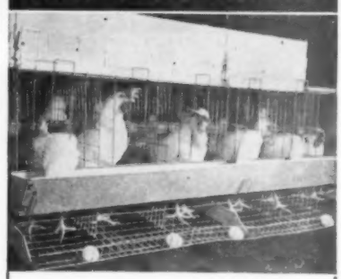
In Pfizer trials with steers, these average daily gains resulted with various levels of hydroxyzine: Control animals, 2.25 lb. per day; 1.25 mg. per head daily, 2.83 lb.; 2.5 mg., 2.68 lb.; 10 mg., 2.82 lb.; 50 mg., 2.74 lb.; 500 mg., 2.61 lb. Feed efficiency also was improved.

No downgrading of carcasses or decreases in dressing percentages were observed in any trial with the ruminants, and several showed significant improvements.

New Antibiotics: An important phase of Pfizer research is screening for new antibiotics, more than 200 of which have been isolated to date. When a new antibiotic shows promise for clinical use, it is subjected also to evaluation for possible uses in agriculture. Such a promising newcomer is oleandomycin. Its antibacterial activity is similar to penicillin in that it is effective mainly against gram-positive organisms.

In recent years many investigators have observed that growth responses and feed efficiency improvements due

FEED CONVERSION



COLONIAL TRUE-LINES convert feed into *large*, premium-quality eggs *more efficiently* than average layers. Feed conversion depends on several factors. These include body size, egg size, the ration's energy-level . . . and inherent ability to utilize feed nutrients efficiently. Some layers have this. Some don't. Tests show TRUE-LINES feed conversion records low as 3.85 pounds of feed per dozen eggs. Besides, TRUE-LINES have large early egg size. Tests show March-hatched pullets with 75% large and extra large eggs in November-December, 95% large and extra large in May-June. Investigate TRUE-LINES' records on commercial farms like yours. Chicks priced to save money . . . up to 25%.

Colonial TRUE LINES®

Write To True-Lines Associate Hatchery Nearest You For Information

EAST
ALBERMARLE ACRES, Unadilla, N. Y.
CAMERON HATCHERY, Beaver Springs, Pa.
BLUE RIBBON HATCHERY, Celina, Ohio
INDIAN HEAD FARM, Toms River, N. J.
KEMNITZER HATCHY, Marysville, Ohio
LANCASTER CTY. FARMS, Ephrata, Pa.
ORCHARD HILL HATCHERY, Mogadore, Ohio

MIDWEST
ABC HATCHERY, Garden City, Mo.
ART'S HATCHERY, Valley Park, Mo.
BOOTH FARMS & HATCHY, Clinton, Mo.
CEDAR RAPIDS HATCHY, Cedar Rapids, Ia.
COLONIAL PLTY FARMS, Faribault, Minn.
COLONIAL PLTY FARMS, Lexington, Nebr.
COLONIAL PLTY FARMS, Pleasant Hill, Mo.
COLUMBIA CITY HATCHY, Columbia City, Ind.
DeFOREST HATCHERY, Eagle Grove, Ia.
FLOYD HATCHY & PROD., Alton, Iowa
GIBSON QUALITY HATCHERIES, Lexington, Mo.
GOLDFIELD HATCHERY, Goldfield, Ia.
GREAT PLAINS HATCHYS, Effingham, Ill.
HAPPINEST HATCHERY & EGG FARM, North Manchester, Indiana
HOFFMAN'S HATCHERY, Shawano, Wisc.
MALLORY HATCHERY, Hutchinson, Kan.
MID-STATES HATCHERY, Adrian, Mo.
MOORE'S HATCHERY, Ionia, Mo.
MOSER HATCHERY, Versailles, Mo.
NOLD HATCHERY, Montrose, Mo.
NORTHLAND FARM, Zeeland, Mich.
PETERSON HATCHERY, Peterson, Ia.
RELIANCE HATCHERY, Cameron, Mo.
REMPEL HATCHERY, Butterfield, Minn.
STANDARD HATCHERY, Terre Haute, Ind.
SUNNYDALE FARMS, Mendon, Mo.
SUPERIOR HATCHERY, Windsor, Mo.
THOMAS HATCHERY, Perryville, Mo.
WALT NEUBERT HATCHYS, Le Sueur, Minn.
WARD BOWEN CHICK'Y, Union Star, Mo.
WHEELER HATCHERY, Norborne, Mo.
WIENKE HATCHERY, Homer, Illinois
WILLCOX HATCHERY, Kingman, Kansas

SOUTH
COLONIAL PLTY FARMS, Cullman, Ala.
COLONIAL PLTY FARMS, Sweetwater, Tex.
GREAT PLAINS HATCHERY, Fulton, Miss.
LEGHORN LAND FARM, Floresville, Tex.
OGLETREE HATCHERY, Lawrenceville, Ga.
ROY D. COUCH HATCHERY, Fayette, Ala.
SANITARY HATCHERY, Weimar, Texas
WALLER HATCHERY, Waller, Tex.

WEST
COLONIAL PLTY FARMS, Lamar, Colo.
EGGIMAN HATCHERY, Beaverton, Ore.
MOUNTAIN STATE HATCHERY, Lamar, Colo.
SAN JOSE HATCHERY, San Jose, Calif.
PENNGROVE HATCHERY, Petaluma, Calif.

FOREIGN COUNTRIES
GHEKIERE HATCHERY, St. Elois-Winkel, Belgium
JANZ HATCHERY, Steinbach, Manitoba, Canada
COLONIAL de MEXICO, Ciudad Lerdo, Dgo., Mexico

Colonial POULTRY FARMS
PLEASANT HILL, MO.

to commonly used antibiotics have been somewhat lower. Similarly, animals and birds on control diets have appeared to make better gains. These phenomena are attributed to improvements in environment through decreased "sub-clinical disease levels" or to reduction or elimination of pathogenic organisms. Addition of this new antibiotic, oleandomycin, to poultry feeds has provided a greater stimulus to gains. For example, Washington State College has shown stimulated poult growth with oleandomycin in the diet at a level of 4.4 mg./kg. and little or no response with some of the older antibiotics. Pfizer studies with chicks in batteries also have shown chick growth stimulation by oleandomycin, and similar enhancement of growth with chicks in floor pens and in baby pigs has been obtained. In view of promising preliminary results, further studies are under way.

Pelleting High-Roughage Rations: A few years ago, about the only ruminant feeds being pelleted in any volume were supplements. However, investigators at New Mexico A&M College and elsewhere found that pelleted complete rations for lambs produced better gains and feed efficiency than concentrates plus roughage. Results now available from studies at nine experiment stations sustain the earlier conclusions. Ration content varied in these tests from 67% concentrate and 33% roughage to 30% concentrate and 70% roughage, with added molasses and minerals.

Successful commercial lamb feeding with pelleted rations is now a reality at large scale installations in California and Oregon. Labor costs are lower due to easier self-feeding and bulk handling of pellets. Their higher density permits savings in storage, shipping and handling. Use of pellets also eliminates selective feeding and reduces wastage and wind losses normally encountered with meals. One report estimates that feed waste is cut up to 30% by using pelleted complete rations for lambs, and that two men can now handle 60,000 lambs via self-feeders. At present pelleting complete ruminant rations high in fiber is now economical in all parts of the U.S.

Hay pellets are now under study at Oregon State College. Preliminary tests indicate increased rate of gain on less feed. Promising results were also obtained with hay pellets in a Cornell study with beef calves.

Such pellets would be made in the field and loaded and unloaded automatically. Pressure of 4,000 psi would produce a hay cake about 1½-2" long, having a density of 35-40 lb. per cu. ft. Field pelleting would help to standardize the quality and physical characteristics of forage for feeding. However, specially designed equipment will be required for this.

Other Pelleting Developments: Pelleted grain rations for dairy cattle are now under study at Washington State College. The tests are being conducted in a milking parlor.

A new automatic pellet mill requiring no steam is reported to be available.

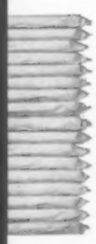
With the use of higher levels of fat and/or roughage in pellets, the problem of obtaining sufficient hardness becomes more complex. Feed manufacturers are turning to inorganic binders as a partial solution to this problem. Bentonite has found considerable application for this purpose at levels of 1-5%, although some feed manufacturers are still concerned

DEHYDRATED
and
SUN-CURED
ALFALFA MEAL
Pellets • Crumbles
Bagged • Bulk
THE A. B. CAPLE CO.
Toledo 5, Ohio

JOIN THE
NETWORK
OF QUALITY MINDED
EGG MEN
MARKETING THEIR EGGS
Under The

HEN'S-BEST
Franchise
Here's a program designed to offer a better market for locally produced eggs of high quality . . . distributed through quality-minded Egg Men . . . and backed with a hard-hitting local promotion program where the Point-of-Sale displays, etc., are furnished FREE . . . to help you sell more "HEN'S-BEST" EGGS in the beautifully designed Case Ace White Carton which protects the eggs against costly breakage. The "HEN'S-BEST" FRANCHISE is being offered to a Quality-minded Egg Man in each trading area who wants to make money. To find out how you too can join the network, write today for the full story and kit of samples.
TOBIAS ENTERPRISES
326 North Michigan Ave. Chicago

stacks solidly! easier to grip!



Thousands of tiny interlocking grooves are pressed into the tough kraft outer-wall of the new Cromwell STAK-GRIP bag . . . by an embossing process originated by Cromwell. Result: *built-in* two-way slip-resistance with no reduction in strength!

In over three years of actual use, the Cromwell STAK-GRIP bag has proved these outstanding advantages:

1. **cuts breakage losses** due to slippage.
2. **increases safety** because bags stack solidly.
3. **helps sales** because both dealers and farmers like the flexible, easy-to-handle surface and the extra-brilliant printing.

for the latest and best in feed bags

brightest, strongest printing you've ever seen on a multi-wall bag!

Printing before embossing gives a 3-dimensional effect to the printing, adds amazing brilliance and intensity, and puts a real merchandising wallop behind your brand.

For a free sample and complete information, write on your business letterhead to Mr. O. N. Johnson.

Cromwell
PAPER COMPANY
4801 South Whipple Street
Chicago 32, Illinois

over possible undesirable effects on nutrients.

Two reports in 1954 revealed that vitamin A deficiencies would develop in rats and chicks fed a diet containing 3% or more of bentonite. The vitamin A activity in the ration was rendered unavailable to the animal because it adsorbed onto the bentonite. However, later studies with practical diets showed no deleterious effects. A more recent test on yearling steers showed no effect from feeding 3% bentonite in a ration containing 25% alfalfa. The authors suggested that the alfalfa pigments saturated the bentonite in the digestive tract, thus providing more vitamin A activity in free form for the animal. Further data on low-alfalfa, low-fat diets are needed to confirm the innocuousness of bentonite for such use.

Newer inorganic binders are the synthetic calcium silicates. These products have high fat absorbing capacity such that about 3 parts of fat to 1 part of binder will yield a fairly dry powder. This suggests a means for adding fat to feed as a "binder premix." The silicates are more expensive than bentonites at present and are therefore generally used at levels from .5 to 1%.

Liquid Feeding of Poultry: It has been standard practice for years to administer medications and sanitizers as solutions via the drinking water. A number of liquid proportioning devices are available for this use. Only recently, however, has research turned to the development of nutrient preparations for poultry which can be supplied through the drinking water. Potential products could be true solutions, emulsions or possibly very fine suspensions. Dry powders which could be easily dissolved or otherwise reconstituted could also be used.

Little, if any data are published on this subject, although studies are in progress in several parts of the country. Stability problems are a major obstacle, both in the liquid product and after addition to the water. Such products should supply a significant quantity of amino acids or protein, energy sources, vitamins, minerals, etc. Such multiple products may prove unfeasible. However, the entire subject is one which merits consideration.

Liquid Feeding of Ruminants: Although molasses feeding to cattle has been practiced for years by individual farmers, only relatively recently the feed industry developed interest in adding other nutrients to this product. The most common liquid feed for cattle today consists of molasses containing added urea, alcohol and phosphoric acid which may be fed free choice or on a limited basis with grain as a partial replacement for grain. If the molasses is ammoniated, urea is not included.

Interest in adding antibiotics, vitamins A and D and minerals to such products has arisen. Studies are under way in this field. Liquid products for cattle appear to have an established place in feeding programs as long as molasses prices remain normal.

Microingredients in Liquids: As feeds become more complex, the number of microingredients is certain to increase. This will further complicate the already difficult process of producing a uniformly mixed feed. Careful feed supplement formulation and premixing will go a long way toward minimizing difficulties. However, the addition of one or more supplements in liquid form could well become a routine procedure.

Several feed manufacturers already are supplying some microingredients as solutions. These include vitamins A and D, cobalt salts, choline chloride and certain drugs. A variety of positive displacement piston and diaphragm type feeder units is available and in use. The advantages of such a procedure include elimination of separation, more uniform blends and an elimination of dry premixing in many cases, etc.

Applicable products may be true solutions, emulsions or suspensions in water or oily vehicles. Soluble or suspendable powders are also of possible utility. Much data has yet to be developed on compatibilities in multicomponent preparations. Stability after spraying and blending into the feed must also be studied. Studies are in progress along these lines, and the outcome may well be production of more uniform feeds through the use of liquid supplements.

Illinois Economist Discusses Integration

URBANA, ILL. — "Farmers' well-being and progress depend partly upon developing a positive attitude toward integration," a University of Illinois economist said recently. "The merits of integration in farming should be judged by whether it will improve the well-being of 170 million Americans."

The economist, E. E. Broadbent, said that integration offers a new frontier for farm leaders to organize their resources on a business basis for the well-being of American farmers. Mr. Broadbent spoke at the Illinois Farm and Home Festival.

He said that those favoring integration recognize that efficiencies can be achieved in production, processing and marketing of livestock "by cutting out some of the steps between farmer and consumer."

"Some opponents of integration," he said, "recognize a definite threat to their existence. If integration programs are widely adopted, the result could mean eventual elimination of many small, high-cost feed businesses, country livestock dealers and even many of the terminal livestock marketing agencies. Since anti-trust laws prevent major packers from going too far into integration, they will oppose it."

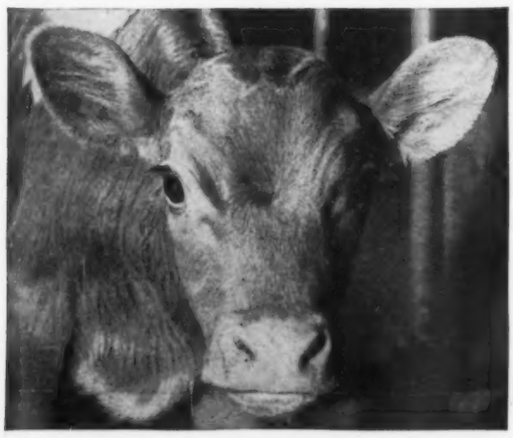
Give your feeds this pure whey extra:

KRACO

the fresh-dried whole whey that's naturally sweet

- no neutralizers added to upset milk mineral balance
- no fermentation to reduce high lactose content*

**Kraco is guaranteed at least 65% lactose—runs are usually between 70-72%*



When you supplement feeds with Kraco, you are using *pure* whey. Nothing has been added, nothing taken away. In processing Kraco, Kraft safeguards its freshness and sweetness in two vital ways:

1st: The whey from low-acid cheese is used.

2nd: It is dried within hours after it is drawn from the cheese vats. Acid content is guaranteed at not more than 3.5%.

Kraco contains all the whey nutrients, including the valuable whey factor, lactose (minimum 65%), milk protein (12%, mostly lactalbumin), milk minerals and B complex vitamins.

Ask the Kraft Man for full particulars.

KRACO *is a Kraft Product* / KRAFT FOODS COMPANY

Order from
Industrial Dept., Chicago
500 Peshtigo Court, Chicago 90, Illinois

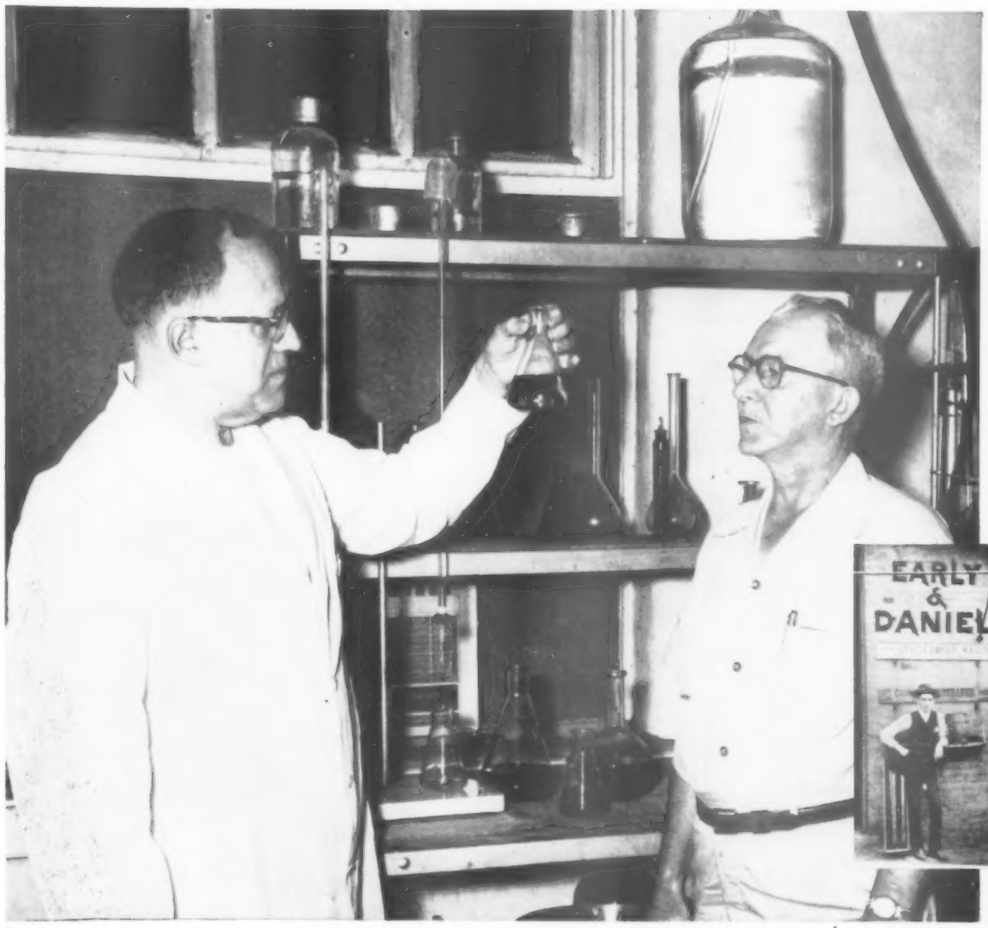
Which grain dryer **is factory assembled?**

ARID-AIRE
. . . and you can
RENT IT!

Daycom, Inc.
811 Third Ave. N.E. • Minneapolis 13

I read FEEDSTUFFS every week. I'm wise to FEED INDUSTRY Happenings

75-Year-Old Manufacturer Finds Fat In Feed Ups Demand, Sales



Every batch of fat is tested for purity and moisture. Everett L. Ashcraft, Plant Superintendent, and Dr. Robert L. Kemper, Nutritionist, are shown here in the company's modern laboratory.

Founded in 1881, the Early & Daniel Company now operate plants in Cincinnati, Ohio, Sumter, S. Car., and Tampa, Florida, and maintain ten branch warehouses.

IN 1881
H. Lee Early and Lewis H. Daniel started this small feed store at Lawrenceburg, Indiana

The Early & Daniel Company was one of the first manufacturers to recognize the importance of fortifying feeds. With their advanced laboratory and farm facilities, they have kept pace with the most progressive college and other experimental programs in feed improvement. Their liberal use of fat in various feeds has resulted in markedly improved feeding value. They also use high levels of meat meal in poultry feeds for better balance of minerals and vitamins. And, sales-wise, "Tuxedo" Feeds readily meet today's demand for a fortified product.

write for FREE Booklet

Fully describes application of fat to feed — and how it can be used to improve your product.

REMEMBER these Proved "Points of Sale"

Stabilized ANIMAL FATS Provide

- Twice as much energy per pound than any other feedstuff
- Better taste
- More efficient use of nutrients
- Dust control
- Assists in pelleting

nra national renderers association

30 N. LASALLE ST. FRanklin 2-3289 CHICAGO 2, ILL.

Only Terramy

is effective against all these 31 important animal diseases

No other drug offers this range of activity

Not even a combination of the 5 drugs listed in the chart can equal the disease-fighting protection of Terramycin

Terramycin's broad range of activity is the reason why it is the drug of choice for your feed use

When animals or poultry become sick, your customers want the most effective drug they can find to fight the infection.

As this chart shows, Terramycin is by far the most active of the 6 drugs against these 31 important diseases.

Some of these diseases must be treated by special dosage forms, such as injection which gets a high level of Terramycin into the blood stream of the animal fast. Others can be treated by tablets or in the water if animals are off feed.

In many cases, the most efficient and economical treatment is through the feed.

That's why high level feeds with Terramycin have become so important in raising livestock and poultry.

Range of activity is important

Average growers are not always able to predict the exact disease condition which may appear. When your feed contains Terramycin, your customers' chances of achieving good results are much greater than would be possible with a limited-range antibiotic.

Proper levels are important

To be effective any drug must be present in adequate amounts. Your high level feed, made with Terramycin at recommended levels, will effectively treat the conditions indicated.

Some feed manufacturers are now experimenting with much higher levels to increase the effectiveness of their feeds against even more diseases.

Don't settle for less

Substitution of drugs with less activity, to achieve the possible saving of a few cents a ton, risks the effectiveness of your feed and possible loss of customers' livestock or poultry.

Today, more farmers and feeders name Terramycin as their first choice over all other antibiotics. This choice is based on the excellent results they have obtained with feeds containing this proven antibiotic.

EFFECTIVENESS OF VARIOUS DRUGS
AGAINST LIVESTOCK AND POULTRY DISEASES
(in feed unless otherwise indicated) information based on available literature

DISEASE	ORGANISM	TERRAMYCIN	FURAZOLIDONE	BACITRACIN	PENICILLIN	SULFONAMIDES	STREPTOMYCIN
ANAPLASMOSIS	PROTOZOA	●					
HEXAMITIASIS		■	■				
FOOT ROT	ACTINOMYCES	★			■	●	●
ACTINOMYCOSIS (LUMPY JAW)		★			●	●	
ERYSIPELAS		★			●		
ENTEROTOXEMIA (OVEREATING)	GRAM POS. BACILLI	■					
ANTHRAX		●			●		●
BLACK LEG		★			●	●	●
MALIGNANT EDEMA		★			●	●	●
MASTITIS		■			●	●	●
PNEUMONIA	GRAM POS. COCCI	★			●	●	●
STRANGLES		★			●	●	●
LYMPHADENITIS (CORYNE ABSCESS)		■					
CHRONIC RESPIRATORY DISEASE	PPLO GROUP	★	■	■	■	■	■
INFECTIOUS SINUSITIS		★	■	■	■	■	■
BLOODY SCOURS	GRAM NEGATIVE BACILLI	■	■	■			■
BABY PIG SCOURS		■	■	■		■	
WHITE SCOURS (CALVES)		■				■	
SALMONELLOSIS			■			★	
PINK EYE	SPIROCHAETES	★					●
MASTITIS		★					●
LEPTOSPIROSIS		★					
SPIROCHETOSIS		★			●		
BLUECOMB	NON-SPECIFIC OR UNKNOWN ETIOLOGY	■	■				
SYNOVITIS		★					
ATROPHIC RHINITIS							
HEMORRHAGIC SEPTICEMIA (SHIPPING FEVER)		★			●	●	●
ENTERITIS		■	■	■	■		
BLOAT		■			■		
PSITTACOSIS (ORNITHOSIS)	LARGE VIRUS	★					●
HEARTWATER DISEASE	RICKETTSIA	●					

LEGEND

■ EXCELLENT ACTIVITY
■ MODERATE ACTIVITY
□ SLIGHT ACTIVITY
□ NO ACTIVITY OR NOT USED

IN FEED OR WATER UNLESS INDICATED

★ IN FEED OR WATER and or INJECTED
● INJECTED ONLY
■ INJECTED, INFUSED OR USED EXTERNALLY

ycin®

BRAND OF OXYTETRACYCLINE

1

TERRAMYCIN FIGHTS THESE SWINE DISEASES

1 Atrophic rhinitis
(to maintain weight gains in presence of this disease)
2 Enteritis
3 Leptospirosis
4 Pneumonia
5 Baby pig scours

Even a combination of bacitracin, penicillin, sulfonamides, streptomycin and furazolidone will not give your swine feeds the coverage you get with Terramycin alone.

What's more, Terramycin offers the added advantage of broadest-range effectiveness against secondary invaders . . . plus Terramycin's well-known ability to stimulate appetites and speed growth.

That's why, when your swine feed contains Terramycin, you can be sure your chances of delivering good results are much greater . . . your assurances of complete customer satisfaction much better . . . than would be possible with any limited-range antibiotic.

Your Pfizer representative will be glad to supply any information wanted. See him soon.

Pfizer

Chas. Pfizer & Co., Inc.

New York • Chicago • Dallas • San Francisco • Atlanta • Montreal

World's largest producer of antibiotics

TERRAMYCIN® . . . BACITRACIN . . . PENICILLIN . . . STREPTOMYCIN . . .
SIGNEMYCIN* . . . OLEANDOMYCIN . . . NEOMYCIN . . . CARBOMYCIN . . .
TETRACYCLINE . . . POLYMYXIN . . . DIHYDROSTREPTOMYCIN . . . VIOMYCIN

*TRADE MARK

Dollar Tender for Exports of U.S. Poultry to West Germany Announced

CHICAGO—Exports of U.S. poultry to Germany are expected to increase in coming months through a new dollar tender announced by the Institute of American Poultry Industries.

The institute's office in Frankfurt, Germany, reported that licenses under the special tender, under which U.S. poultry can be exported to Germany, would be issued by the German government.

The Frankfurt office was established to carry out the market development activities which the institute is conducting for the U.S. poultry industry in cooperation with the Foreign Agricultural Service of the U.S. Department of Agriculture.

The tender covers whole ready-to-cook turkeys, fowl, broilers and New York dressed ducks—Grade A quality only—accompanied by a USDA certificate, issued at point of processing.

A group of 28 poultry and egg importers from West Germany visited the U.S. for two weeks in February. Their visit began at the Institute of American Poultry Industries' annual Fact Finding Conference in Kansas City. From there, they went to San Francisco; Modesto, Cal.; Los Angeles; Chicago; Washington, and New York.

They toured plants in the vicinity of those cities and were shown the high quality of the U.S. product, the importance of promotion and expanding per capita consumption, and had an opportunity to meet the men and companies with whom they have been and will be doing business.

Two years ago, U.S. poultry was an unknown commodity in Germany. As a direct result of the institute's market development work in cooperation with the Foreign Agricultural Service, not only has poultry been shipped to Germany in increasing quantities, but so much interest has been created among German customers that they visited the U.S. to become better acquainted with U.S. products and methods of processing and promotion.

The American Feed Manufacturers Assn., American Poultry & Hatchery Federation, National Broiler Council, National Turkey Federation and the Poultry & Egg National Board have selected the institute to be the cooperating agency, representing the entire poultry industry, which would work with USDA in cooperative programs under PL 480, to develop international markets for poultry and eggs.

Frank Dorsey, Former Sales Executive, Dies

SILVER CREEK, N.Y.—Frank E. Dorsey, 84, with the S. Howes Co., Silver Creek, as a sales executive for 40 years before his retirement in 1951, died recently after a long illness.

Mr. Dorsey, born in Indiana, spent his early life in Richmond, Ind., where he learned the millwright trade and traveled for the Richmond City Mill Works. Later he traveled for Nordyke & Marmon Co. in Mexico and South America, supervising the construction of flour mills.

In 1911 he became associated with the S. Howes Co., representing the firm in seven states with headquarters in Kansas City, Mo.

George P. Deibel

JOINS DIXIE MILLS—Dixie Mills Co., East St. Louis, Ill., producer of Dixie Feeds, has announced the appointment of George P. Deibel as advertising and sales manager. One of his primary responsibilities will be the supervision of an expansion of the firm's advertising, merchandising and sales promotion programs. Before joining Dixie Mills, Mr. Deibel was an account executive with Al Maescher Advertising, Inc., Clayton, Mo., where he worked extensively on advertising plans for Dixie Mills Co.

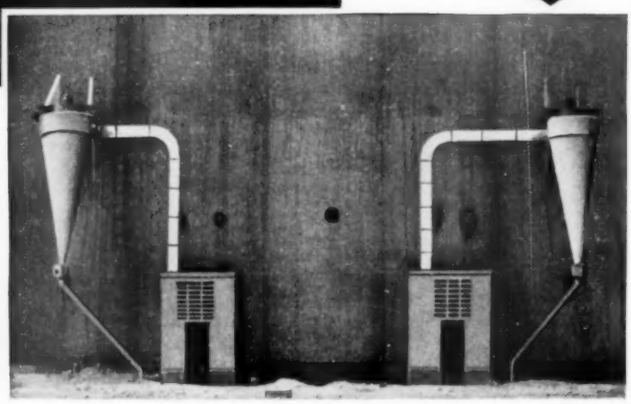
Feed Shipments Rise At Canadian Plants

WINNIPEG—Shipments of all types of feeds from Canadian plants were larger in January, according to current reports from the Dominion Bureau of Statistics.

Shipments of primary or concentrated feeds climbed 9.5%, from 33,499 to 36,668 tons; secondary or complete feeds increased 4.6%, from 179,582 to 187,784 tons, and all other animal feeds went up 9.8%, from 41,702 to 45,778 tons.

HOW TO CONTROL DUST THE NEW, LOW-COST WAY

One of the World's Largest Grain Elevators—C-G Grain Co. 20-million bushel house near Wichita, Kansas—equipped with the Forster "FORNADO" Dust Control twin installation pictured below. A 450-foot dust-free tunnel.



It's the New

FORSTER FORNADO *Dust Control* SYSTEM

top efficiency at lower operating cost

The Forster AIR-LOCK IS ONE reason for high efficiency of the Forster "FORNADO" dust system. Installation pictured above returns recovered material from receiving unit to stock, still keeping a positive air seal on this highly efficient dust control system.

AT LAST! Here's a dust control system that is simple and efficient with all operating savings from modern engineering and design. It is the new Forster FORNADO, an integrated pneumatic system that fits both large and small plants.

When you see it, you will recognize at once that FORNADO is miles ahead of the field because it is so compact. The unit consists of a skillfully designed collector, a high static precision fan connected directly to the motor and an efficient airlock.

The secret of its success is the carefully balanced capacities of each part of the unit. And the secret of its lower cost is simple installation, big power savings and easy maintenance. FORNADO has been tested and proved in installations like that in the big C-G grain elevator pictured above.

It's easy to modernize your present system and get the extra efficiency and low operating costs of top-rated FORNADO. Let Forster engineers analyze your problem without cost to you.

The FORSTER MFG. CO.
Ada, Oklahoma

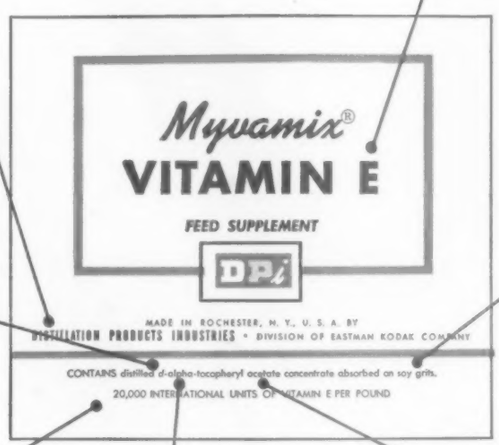
Machines for Modern Milling

CANADIAN OATS
POULTRY • FEED • SEED
MIXED FEED
PROCESSED
ALL GRAINS
& BYPRODUCTS
CANADIAN SCREENINGS
FLAX AND REFUSE
GROUND AND BULK
JAMES RICHARDSON & SONS LIMITED
ESTABLISHED 1857
14th Floor, Royal Bank Bldg.
2 King St., E. TORONTO
Head Office, Winnipeg, Canada

PROFITABLE IDEAS FOR DEALERS IN THE CASH REGISTER

For information or a quotation on *Myvamix Vitamin E Feed Supplement*, write ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York, Chicago, and Memphis • Charles Albert Smith Limited, Montreal and Toronto • Or, contact the distributor nearest you.

Vitamin E is considered by many authorities to be an essential part of a nutritionally complete diet for chickens, turkeys, dogs, and other animals. We will be happy to send literature references on request.


Myvamix®
VITAMIN E
FEED SUPPLEMENT
DPi
MADE IN ROCHESTER, N. Y., U. S. A. BY
DISTILLATION PRODUCTS INDUSTRIES • DIVISION OF EASTMAN KODAK COMPANY
CONTAINS distilled d-alpha-tocopheryl acetate concentrate absorbed on soy grits.
20,000 INTERNATIONAL UNITS OF VITAMIN E PER POUND

The "d" means the vitamin E in *Myvamix Vitamin E Feed Supplement* is the same stereoisomer that appears in nature. 1 milligram of *d*-alpha-tocopheryl acetate is equivalent to 1.36 International Units of Vitamin E.

The vitamin E in *Myvamix* is on a dry, non-dusting soy grits base. We use grits instead of meal because they have less fiber, less moisture, more protein, more uniform particle size, and are dusted to remove hulls and powder. All this means a higher quality product, one that's as easy to handle as anything in your mill.

With *Myvamix*, you know exactly how much vitamin E is in your feed. There's a sure 20,000 International Units of Vitamin E per pound. The cost is only a few dimes per ton of feed.

There are at least seven tocopherols which have some vitamin E activity. The most effective biologically is "alpha." That's what is in *Myvamix Vitamin E Feed Supplement*. (Only 10 to 15% of the tocopherols in corn is "alpha"—the rest is "gamma," one of the least effective of all.)

The "acetate" means that the vitamin E in *Myvamix* is really stable. Tests show no loss of potency even after storage in finished feeds for six months at 100 F. The full potency you put in the feed is there when the feed is fed.

Recent Developments in Mineral Nutrition Of Poultry and Swine

By Dr. George M. Briggs
National Institutes of Health

EDITOR'S NOTE: A summary of recent developments in mineral nutrition of poultry and swine—including suggestions on the practical significance of various research findings—was provided recently by Dr. George M. Briggs of the nutrition section of the National Institutes of Health, Bethesda, Md. Dr. Briggs presented the review of current information in a talk at the University of Maryland Nutrition Conference for Feed Manufacturers. The accompanying article is from his talk at the conference. This is particularly timely in view of the recent emphasis on mineral nutrition research. As Dr. Briggs pointed out, the feed industry is entering an era in which increased attention will be given to minerals.

* *

Until two years ago the list of known essential inorganic elements for animals had remained constant for at least twenty years. The list included calcium, phosphorus, potassium, sodium, chlorine, sulfur (as methionine), magnesium and the following trace elements: Iron, manganese, iodine, zinc, copper and cobalt.

Recently, two more minerals have been shown to be required by animals under certain dietary conditions. They are molybdenum and selenium. Also, renewed interest has been shown in zinc and iron.

Molybdenum: Studies with molybdenum, conducted chiefly at Texas A&M College, as well as at Cornell University, show that chickens and poults require this element but only under special and unusual laboratory conditions. As of this date, evidence for a dietary requirement for molybdenum in the absence of a dietary imbalance has not appeared in the scientific literature, even with studies with highly purified diets.

Several years ago it was shown that molybdenum is an essential component of a tissue enzyme, "xanthine oxidase." What has not been proven as yet is that this enzyme is essential for the animal body (but this is likely.) Obviously, molybdenum will be classified as an essential dietary ingredient when this is proved.

Dr. George M. Briggs

Dr. Couch and coworkers of Texas were the first to show that molybdenum may be required by poultry. Their growth effects with molybdenum may possibly be explained by dietary mineral imbalances, such as the high sulfur content of the drinking water, the high calcium or iron in the diet or the imbalance of other minerals.

Richert, Bloom and Westerfeld of Syracuse University obtained a molybdenum deficiency in rats this past year by feeding tungsten, another mineral. Similar results have been obtained with poultry at Cornell University.

Whether or not molybdenum is essential for practical rations would appear to depend on the conditions under which the feed is to be used. Under normal conditions there appears to be no need for supplementary molybdenum in practical swine or poultry rations. The importance of molybdenum for the growth of plants in certain molybdenum-deficient areas is well known.

Bromine: Studies at Merck Sharp & Dohme Research Laboratories in 1956 indicated that the trace element bromine (closely related to iodine, chlorine and fluorine) may be needed in the diet of mice and chicks. Others have failed to confirm these studies. In any event, we may conclude that there is no need to add bromine to

(Continued on page 42)

PILOT BRAND OYSTER SHELL FOR POULTRY

CONSISTENT ADVERTISING HELPS PULL SALES YOUR WAY

PILOT BRAND is, by far, the most widely advertised eggshell material. PILOT BRAND advertisements appear regularly in leading farm and poultry journals read by thousands of poultry raisers everywhere. In addition, the PILOT BRAND story is regularly being told on more than 70 prominent radio stations.

It is because of this consistent advertising of a tried and proved product, plus the splendid efforts of the many feed dealers who regularly stock and promote PILOT BRAND, that PILOT BRAND Oyster Shell is the largest selling eggshell material in the world. It pays to back a winner.

Order from your distributor or write to us

Oyster Shell Products Corporation
Mobile, Alabama

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

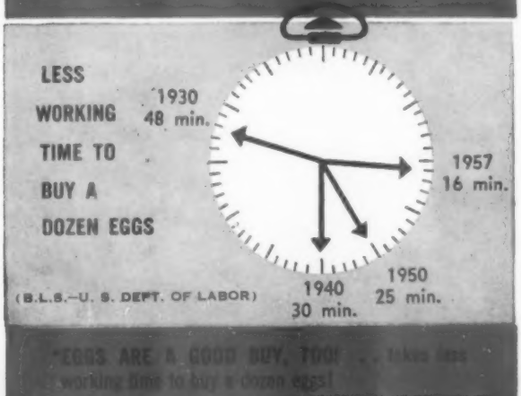
SW
FOR THE BEST IN
ASPIRATORS
SPROUT-WALDRON
MUNCY, PENNA.

FEEDPOWER *leads to* FOODPOWER...U.S.A.

Bill and Herb Steinbrueck, Trojan Hatchery, Troy, Missouri.

"INCREASED FEED EFFICIENCY . . . Steinbruecks' produce a dozen eggs on 3.75 lbs. all-mash egg feed!

"MORE EGGS ON THE DINNER TABLE . . . the way the consumer likes 'em!



"EGGS ARE A GOOD BUY, TOO! . . . takes less working time to buy a dozen eggs!

Today, the United States has the highest standard of "eating" in the world. Its people have a balanced "protein" diet. This "protein" diet provides more health, more vitality . . . more strength than the "carbohydrate" diets of other nations.

Behind this "FOODPOWER . . . U.S.A." lies the world's most efficient, most productive system . . . "Feed Power". Every Country's "Feed Power" starts with its native grains and roughages. But the United States has developed an efficient "free enterprise" system of producing "protein" foods. The U. S. has the feedstuffs and the technical knowledge to produce "protein" feeds and "protein" balanced rations for livestock and poultry. This results in the production of more "protein" food . . . meat, milk and eggs . . . at a price the average person can afford to pay! What's more, these are the "protein" foods every American likes . . . the "protein" foods that make the United States the healthiest, most productive nation in the world.

Yes, "Feed Power" . . . the efficient system that promotes greater growth, health and productivity in poultry and livestock . . . leads to "FOODPOWER . . . U.S.A."

McMILLEN FEED MILLS
Fort Wayne, Indiana

MASTER MIX FEEDS

CYANAMID

Better health for customers' livestock and poultry

You're stepping up customer profits

when your feed tags carry these disease claims for

Aureomycin®

NO OTHER ANTIBIOTIC OFFERS SO MANY!

Government-approved claims assure your customers that they're getting *the maximum in antibiotic value* when they buy feeds containing AUREOMYCIN Chlortetracycline.

No other antibiotic – or combination of antibiotics – can claim to be so effective against so many diseases *and prove it!* AUREOMYCIN in feeds gives day-in, day-out protection against profit-wasting diseases. It stimulates growth. Birds and animals thrive on it – stay healthy and thrifty. They produce more meat and eggs in less time on less feed.

On the dollars-and-cents side: only a small fraction of the extra benefits goes to pay for the cost of the AUREOMYCIN. The rest is *extra profit* for your customers. They also enjoy a tremendous saving in the extra costs that disease entails.

The manufacturer whose feeds produce such results can be sure of continuing customer loyalty. What better reason can you have to recommend feeds containing AUREOMYCIN!

ANIMAL FEED DEPARTMENT · AGRICULTURAL DIVISION

LAYERS

BLUE COMB (nonspecific enteritis)
CRD (air sac infection)
SECONDARY INFECTIONS
(during stress periods)

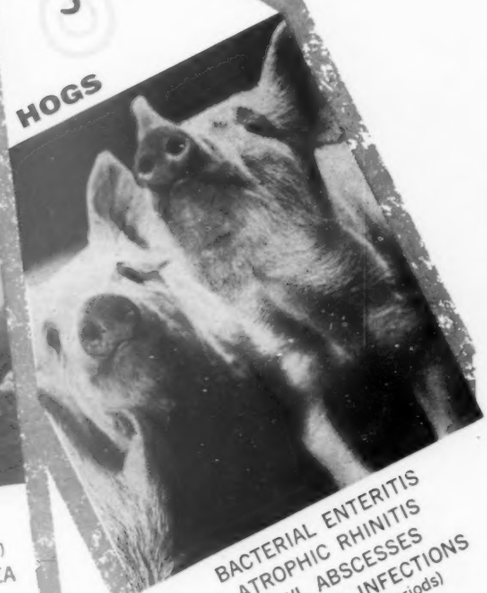
AUREOMYCIN reduces these diseases—
improves feed efficiency and egg production

DAIRY COWS

RESPIRATORY DISEASE
(Rhinotracheitis—shipping fever complex)
FOOT ROT • BACTERIAL DIARRHEA

AUREOMYCIN reduces these diseases—
improves general all-round health

HOGS



BACTERIAL ENTERITIS
ATROPHIC RHINITIS
JOWL ABSCESSES
SECONDARY INFECTIONS
(during stress periods)

AUREOMYCIN reduces these diseases—
improves feed efficiency and weight gains

TURKEYS

BLUE COMB
(nonspecific enteritis, mud fever)
SINUSITIS
HEXAMITIASIS

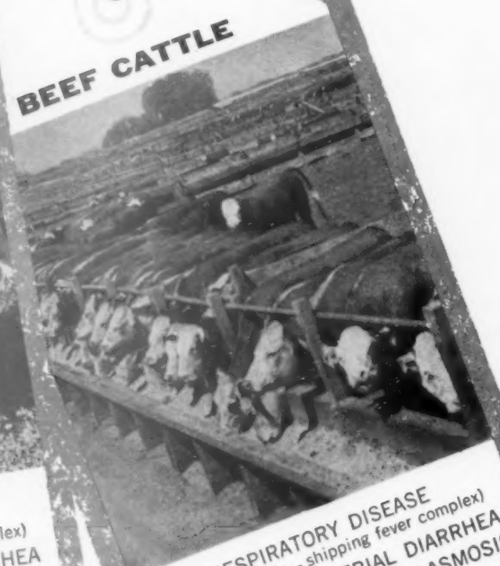
AUREOMYCIN reduces these diseases—
improves feed efficiency and weight gains

DAIRY CALVES

RESPIRATORY DISEASE
(Rhinotracheitis—shipping fever complex)
FOOT ROT • BACTERIAL DIARRHEA

AUREOMYCIN reduces these diseases—
improves feed efficiency and weight gains

BEEF CATTLE



RESPIRATORY DISEASE
(Rhinotracheitis—shipping fever complex)
FOOT ROT • BACTERIAL DIARRHEA
LIVER ABSCESSES • ANAPLASMOSIS
SECONDARY INFECTIONS
(during stress periods)

AUREOMYCIN reduces these diseases—
improves feed efficiency and weight gains

AMERICAN CYANAMID COMPANY • NEW YORK 20, N.Y.

PHOS-FEED®
BRAND
DICALCIUM PHOSPHATE
MINERAL SUPPLEMENT FOR FEED MIXTURES

Makes good feeds even better!

- The feed ingredient with phosphorus (18½% and 21%) and calcium in most available form
- *Lowest* in fluorine, containing less than .004% (that's less than 40 parts per million!)
- A dependable source of supply, assured by quality-control from mine to user
- Blends well . . . stable in storage . . . dry and free-flowing . . . won't cake or clog
- Derived from 99.9% pure Elemental Phosphorus

PHOSPHATE FEED SOLUTION
Guaranteed Minimum Phosphorus—23.7%
Write or Phone for Information

WRITE OR CALL CHEMICAL SALES DIVISION
The AMERICAN AGRICULTURAL CHEMICAL Co.
50 Church Street, New York 7, N.Y., Telephone BArclay 7-1400

practical feeds for swine or poultry according to present knowledge.

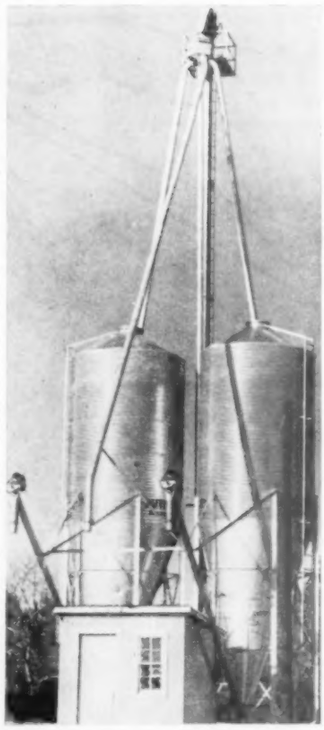
Selenium: In June, 1957, it was announced by Drs. Schwarz and Foltz at the National Institutes of Health in Bethesda that certain salts of selenium had marked beneficial effects in preventing a dietary liver disease in rats fed certain diets deficient in vitamin E. Several months later the Bethesda group (with Dr. Scott of Cornell University) and workers at American Cyanamid Co. announced that "exudative diathesis" in chickens fed vitamin E-low diets containing large amounts of torula yeast can be prevented by extremely low levels of these same selenium compounds. No effect is noticed in diets containing vitamin E. This finding has proved very interesting and has stimulated much research now in progress.

At the recent meeting (November, 1957) of the American Society of Animal Production, investigators of the American Cyanamid Co. (Eggert, Patterson, Akers and Stokstad) reported that swine require selenium for normal growth when fed diets high in torula yeast and low in vitamin E. Other laboratories have since confirmed these studies with pigs (unpublished). With all animals studied (rats, poultry and swine) considerably less selenium salts are needed than vitamin E for the protective effect.

The studies with selenium are especially interesting since selenium for many years has been considered a highly toxic element—one to be avoided in feeds. The effective dietary dose for the prevention of symptoms, however, is much less than the toxic dose.

Many interesting facts regarding selenium in nutrition will be uncovered in the future. For instance, Dr. Schwarz of the National Institutes of Health is studying an organic factor (Factor 3) which contains selenium but which is three or four times as active as inorganic selenium compounds (unpublished data). Factor 3 active compounds have been shown not to be effective against certain forms of classical vitamin E deficiency such as muscular dystrophy in rabbits, encephalomalacia in chickens and faulty reproduction in rats.

The question which concerns the feed man is: "Should selenium compounds be added to practical rations?" The best answer I have is that there is no evidence at present that practical feeds for animals require added amounts of selenium un-



BULK STATION — This new bulk feed distribution plant is among the first of its kind in the Tupelo, Miss., area, according to the owner, M. H. Gunner of Tupelo. He said the feed will be picked up in bulk by broiler house operators.

sell Kflex® **NURS-A-CALF** when you sell **MILK REPLACERS**

proven advantages of **NURS-A-CALF** *mean big profits for you.*

NURS-A-CALF saves farmer's time.

NURS-A-CALF —feeds "naturally."

NURS-A-CALF insures against contamination.

NURS-A-CALF makes weaning easier.

NURS-A-CALF returns cow to milk-production earlier.

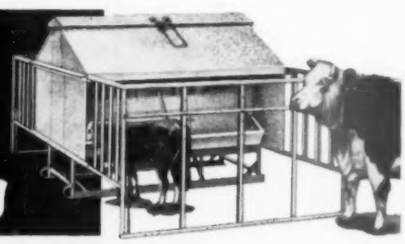
NURS-A-CALF boosts sales of milk replacers.

NURS-A-CALF gives you full margin of profit.

Kflex® **NURS-A-CALF**

sell Kflex® **SILO COVERS**
tailor made
any width
any length
any shape
SAME DAY SHIPMENT
Kflex® CUSTOM COVERS
R. L. KUSS & CO., INC.
FINDLAY, OHIO

BROWER CREEP FEEDER FOR *Calves*



CAPITALIZE ON THE TIME-AND-WORK SAVING FEATURES . . . THE INCREASED PROFITS YOUR CUSTOMERS CAN MAKE!

Here's the product that spells p-r-o-f-i-t-s for feed dealers! Farmers are interested in getting heavier, upgraded calves at weaning . . . better price . . . earlier marketing. Brower Calf Creep Feeder keeps cows out — saves feed. Its big capacity saves time and work. Weather tight — keeps feed dry in all weather. Anchors solidly at all 4 corners — stays put. Sturdy angle iron stalls fold to top for easy towing on steel skids. Hopper and trough of heavy, rust-resisting Armco Zincgrip. Shipped knocked down to save freight; easy to assemble.

NOW AVAILABLE IN 2 SIZES! Double stall creep feeder (above) holds 30 bushels, takes care of 40 calves; single stall creep feeder (below) holds 12 bushels, takes care of 20 calves.

BROWER *Pig Creep Feeder*

Hog farmers are fine prospects for Brower's Pig Creep Feeder — in earlier gains, earlier weaning and healthier pigs. Keeps sow out of pig's feed — gives pigs a head start at weaning. Feeder is weatherproof, sanitary, easily moved. Sturdily built — body of heavy, rust-resisting Armco Zincgrip. Holds 8 bu. feed; capacity 75 pigs.

• **WRITE FOR FREE CATALOG SHOWING OUR COMPLETE LINE OF POULTRY AND LIVESTOCK EQUIPMENT.**

BROWER MANUFACTURING CO., 588 N. 3rd, Quincy, Ill.

Products of Progress
Coronet Defluorinated Phosphate (CDP)
NATIONAL ALFALFA MEAL
MID WEST Sweet-Dried Whole Whey
AUROFAC AUREOMYCIN PRODUCTS
SHEA DICALCIUM PHOSPHATE
SMITH'S Lifeline Menhaden FISH MEAL
GRAN-I-GRIT
SERVALL STAZDRY your best litter buy
EGG SHELL BRAND pure reef OYSTER SHELLS
FOXCO SPECIALTY PRODUCTS For prevention and control of disease
ACCONOX 25 ANTIOXIDANT PREMIX
THE FOX CO.
NEWFIELD, NEW JERSEY
OXford 2-4400
BROADWAY, VA., and SELBYVILLE, DEL.

der any conditions, with or without vitamin E.

In our laboratory, studies by Dr. Bieri and coworkers indicate that very high levels of torula yeast (over 10%) cause an increase in the selenium requirement. One of the responsible agents appears to exist in the ash of torula yeast (unpublished data). There is no evidence that torula yeast at the levels used in animal feeds is harmful in any respect. It is a good dietary supplement.

Zinc: There has been excellent work at many laboratories showing that the requirement of swine for zinc is higher than previously believed. The requirement is not only influenced by calcium and phosphorus, but apparently by other nutrients in practical rations. More studies are needed, but it can be concluded that under practical conditions the requirement of swine for zinc may be as high as 40-60 p.p.m. This is more than the amount usually present in practical rations. It appears that under certain conditions the requirement of chickens and turkeys for zinc is higher than previously thought.

Iron: It has always been difficult to insure an adequate dietary iron supply for baby pigs. In the past year preparations of iron-dextran complex have become available which may be injected in baby pigs (in one dose) before weanling age to safely supply iron for several weeks after the injection. Such studies offer much promise in the development of healthy weanling pigs. Similar studies have been made with calves.

Iodine: Of special interest with respect to this mineral is the development of stable preparations for practical feeds and mineral mixtures.

Calcium and Phosphorus: Studies are still appearing on the availability of various forms of calcium and phosphorus for animals. A recent study from Guelph with chickens indicates that "colloidal phosphate" can be used to supply a part of the phosphorus requirement but not as the sole source. More studies on calcium and phosphorus availability are needed.

Unidentified Minerals: Several years ago there was a considerable flurry among poultry nutritionists over "unidentified minerals." At present the situation has calmed down. There may be "unidentified minerals" essential for poultry and swine, but the evidence for this is relatively poor. Nutritionists are taking another look at the adequacy of their experimental diets in known minerals and other nutrients. As pointed out by Briggs (1956), some of the diets used by poultry investigators are low in certain known minerals as measured by National Research Council standards. Maryland and Missouri workers, for instance, have shown that potassium and zinc are deficient in certain experimental diets.

The moral to be found in this is that the investigator and the feedman should not be too hasty in accepting reports of a new essential mineral. As stated in a recent "Nutrition Reviews" article, such reports "should be carefully examined and confirmed before they are finally accepted. The difficulties associated with disproving the essential nature of a substance after a premature report of its need has appeared are well known."

Conclusion: We are entering an era in which, as others have said, increased attention will be given to minerals. From the feed manufacturer's point of view, each essential mineral is just as important as any vitamin—especially so when it is present in insufficient amounts!

FDA Clears Malathion For Grain Treatment

NEW YORK—Malathion has been cleared by the Food and Drug Administration for direct application to stored grain, according to American Cyanamid Co., manufacturer of the new insecticide.

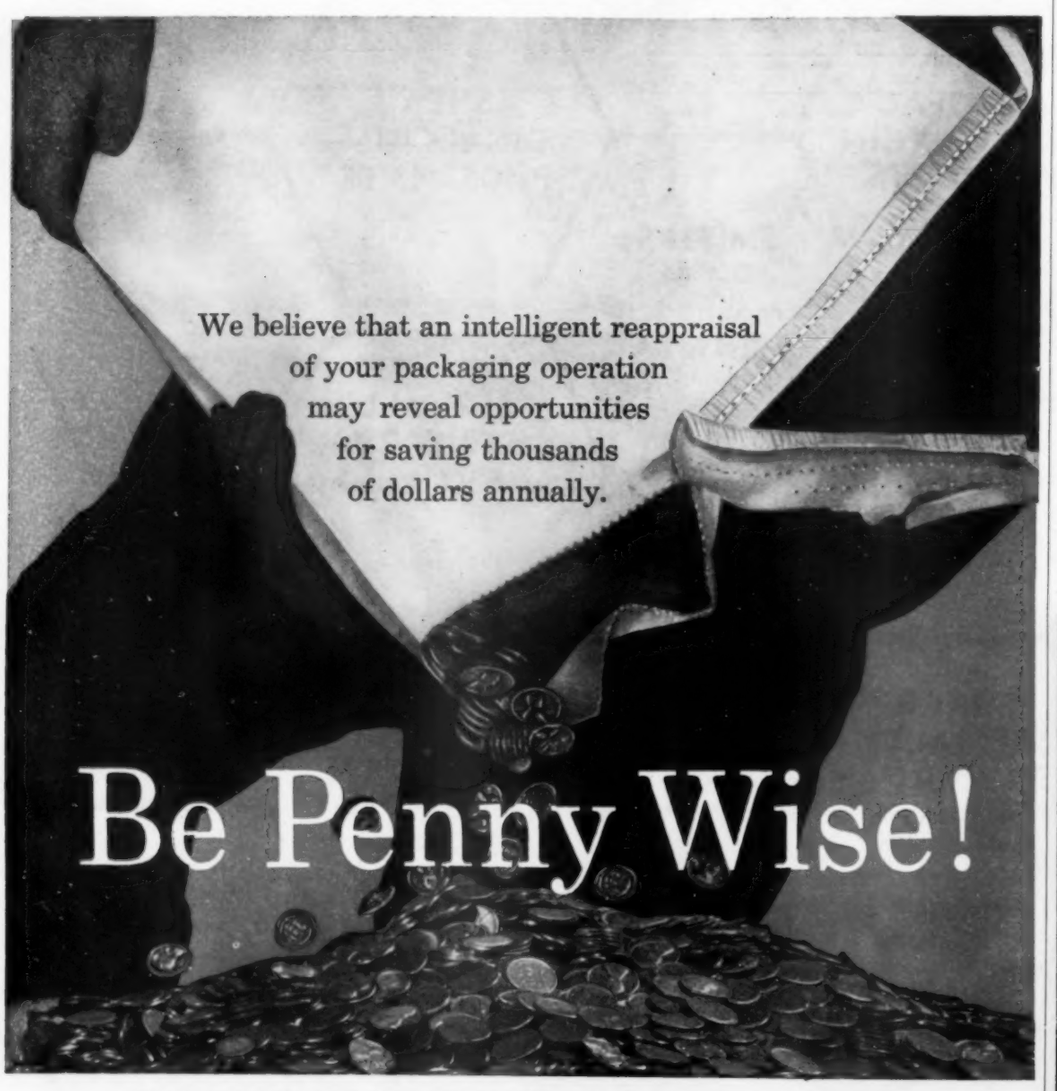
This new use follows clearance by the FDA permitting direct use of the product on the bodies of meat type animals and poultry which was announced only a few weeks ago.

Research here and abroad, and practical use of malathion in Canada, where its application to stored grain has been permitted for almost two years, have established the chemical as an effective insecticide against the major pests which infest storage bins, Cyanamid said.

The manufacturer points out that malathion gives continuous protection against insect infestation over a long period following storage of grain, is economical to use and presents no residue problems. It can be used in both sprays and dusts.

Moves Sales Office

SAN FRANCISCO — The Quaker Oats Company's western division, which has been located in San Francisco for 35 years, has moved its sales offices to 205 W. 20th Ave. in San Mateo, Cal. H. A. Wagner, manager of the San Francisco sales office, made the announcement.

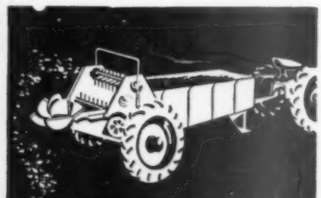


IN BUYING MULTIWALL BAGS NO SAVING IS TOO SMALL TO IGNORE!

THE KRAFTPACKER Open Mouth Bag Filling Machine, for free-flowing material, automatically saves pennies, too, through higher production and greater accuracy. Requires a lower investment and maintenance cost than any other automatic machine of its type in use today!

KRAFT BAG CORPORATION
Gilman Paper Company Subsidiary
630 Fifth Avenue, New York 20, N. Y.
Daily News Bldg., Chicago 6, Ill.
Integrated mills at St. Marys, Georgia and Gilman, Vermont
Exclusive Sales Agents for Kraftpacker

Show me how to save on my multiwall bag packaging.
Gilman PAPER CO.
COMPANY.....
ADDRESS.....
CITY..... ZONE..... STATE.....
PRODUCT MFD.....
NAME.....



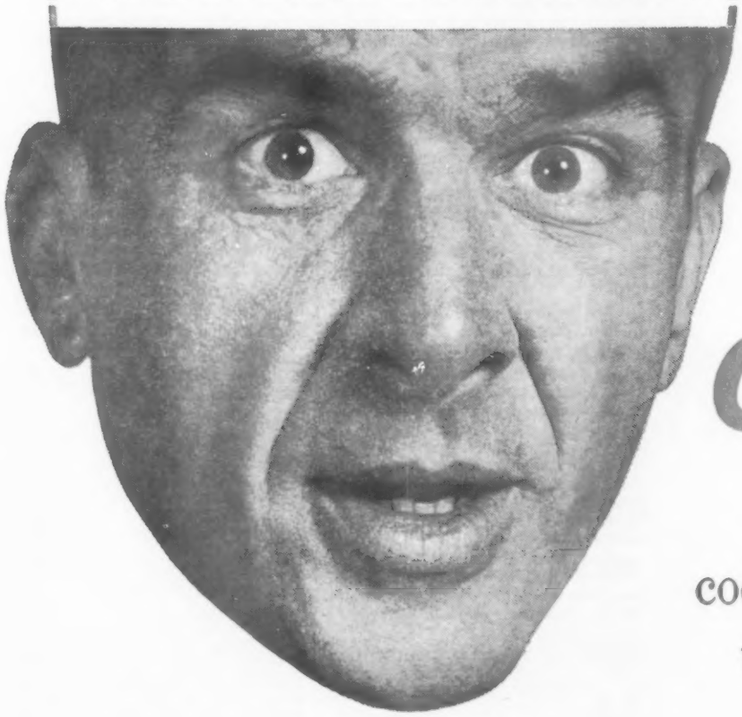
It's DANNEN for FERTILIZER and

- Feed Ingredients
- Soybean Oil Meal
- Tankage, Meat Scraps
- Cottonseed Meal
- Grain Fumigants

DANNEN MILLS, INC.
Grain and Jobbing Division
St. Joseph, Mo. Phone 3-0281
DANNEN

What?

Can anything be better than NICARB® for coccidiosis?



Yes!

GlyCamide*

The new, safer coccidiostat from **Merck,** the makers of NICARB®

As you know, NICARB, a product of Merck research, has practically wiped out coccidiosis as a threat to broilers and replacement flocks. But, as nearly perfect as NICARB was—and is—in preventing coccidiosis in young and growing stock (a record of achievement in *over three billion birds),* it did leave one area for improvement: NICARB could not be fed, at broiler levels, to breeders, or other birds in production, without side effects.

Now—a potent, safe drug for birds of all ages—A program to test and screen other drugs to find a coccidiostat with the potency of NICARB, but without its side effects, was initiated at the Merck Research Laboratories. The result of that intensive laboratory search, rigidly tested under practical field conditions, is now available to the members of the poultry industry. That product—a proud companion to S.Q.® and NICARB—is GLYCAMIDE.

Continuing leadership in coccidiosis control—If you have used or recommended S.Q. or NICARB you already know of the Merck assurance of quality that stands behind these time-tested products. With the same assurance you may now specify GLYCAMIDE for chicks of all ages! GLYCAMIDE is the most potent drug ever developed for the prevention of coccidiosis outbreaks. It is also one of the safest drugs of its kind. Fed at recommended levels, it will not interfere with subsequent fertility, hatchability, eggshell pigmentation or internal egg quality. However, GLYCAMIDE is not currently recommended for birds in production. Merck & Co., Inc., Chemical Division, Rahway, N. J.

**Trademark of Merck & Co., Inc. for glycarbylamide.*
®Merck & Co., Inc. for nicarbazin and sulfaquinoxaline.

***Choose the coccidiostat that suits your needs**—NICARB—for broilers—S.Q. for turkeys—and GLYCAMIDE—the universal coccidiostat—for broilers, and replacement chicks for laying and breeding flocks.*

April is Animal Health Month

MERCK

GlyCamide *with* **THE MERCK MARGIN OF SURETY**

© Merck & Co., Inc.

Flexibility and Labor-Saving Provided in New Washington Mill Operated by Two Men

By ROGER BERGLUND
Feedstuffs Managing Editor

Back in 1954, the feed mill of Stanwood's Feed & Farm Supply at East Stanwood, Washington, was destroyed by fire. All wasn't lost, for the firm had an old building into which it could move and carry on its business, providing grinding and mixing service. However, thought was given to the need for rebuilding bigger and better.

Finally, plans were made to go ahead and construct a new mill. Now the owner of the recently completed plant, Harold Fjarlie, looks back and feels that he should have rebuilt sooner. This is particularly true when he sees the improved efficiency and service which the new mill has brought.

It's an up-to-date local area mill, adapted to needs of the community and Mr. Fjarlie's business, and it incorporates several interesting features in the way of labor-saving, flexibility, low-cost operation, and smooth, efficient handling and processing.

Two Men Operate It

Two men can operate the entire mill with ease, processing Purina concentrates, grain and other ingredients into sacked or bulk finished feeds. Among the features of the mill are pneumatic systems for unloading and moving materials within the mill, a combination manual and semi-automatic central control system for operation of the batch-mixing mill, bulk handling of some concentrate as well as grains, facilities for preparation of both mash and pelleted feeds, and mechanical handling of finished feeds in both bulk and sacks. The mill was designed and built by Reid-Strutt Co., Inc., of Portland, Ore., San Francisco, Cal., and Spokane, Wash.

Harold Fjarlie is the operator of the new feed mill at East Stanwood, Wash. He is pleased with the better efficiency and service which the new mill provides, and he says he wishes now that the firm has rebuilt sooner following a fire which destroyed the old mill in 1954.

A description by Mr. Fjarlie of the mill facilities and operation was one of the highlights of the program at the 1958 Feed Mill Production School, sponsored by the Washington State Feed Assn.

East Stanwood, located north of Seattle in western Washington, is in what is primarily a dairy area. However, turkey and poultry feeds also are supplied to farmers in the community.

Sack or Bulk

In addition to considering types of feeds and capacity needs in making plans for the mill, Mr. Fjarlie had to determine whether to set up for a sack or bulk operation. Warehouse and office space needs also came in for consideration in the planning and figuring, as did basic budget considerations.

Mr. Fjarlie said he expects bulk feeds to increase in importance just as bulk handling of milk grew, and for that reason bulk finished feed bins and loading out facilities were provided.

As is the case in most businesses, better overall efficiency and service to customers were basic factors in plans for the new mill, and Mr. Fjarlie felt that if he was to be in the fast-moving feed milling business, he should provide for these things with the right facilities and at the same time reduce labor and operation costs.

Basic Ideas in Design

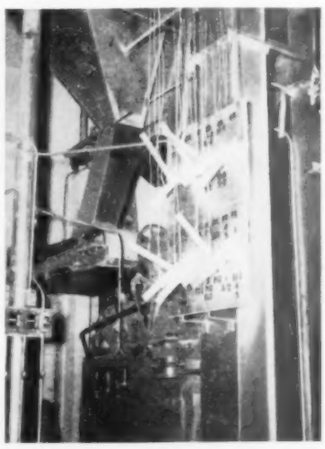
After Mr. Fjarlie had made the decision to proceed with the rebuilding, he spent a good deal of time consulting with Reid-Strutt engineers to determine just how the entire unit would function and be equipped. Together they worked out the basic plans. Among the things which they wanted were:

1. A flexible mill design.
2. Low-cost operation.
3. Provision for possible future expansion.
4. Minimum chance of mixtures and contamination of today's potent feeds.
5. A modern batching system and efficient controls (which also turned out to be a real sales aid).

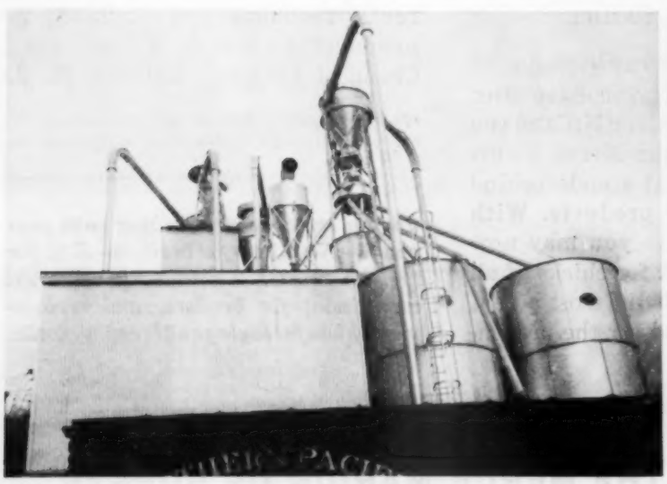
A front and side view of the new plant of Stanwood's Feed & Farm Supply, Inc., at East Stanwood, Wash. The office and display area are in front, with a warehouse and the mill section and outside storage tanks to the rear.

The overall plant is 50x132 ft., and mill construction is of corrugated iron and aluminum over wood trusses and frame. The layout includes a 28x50 ft. office and display room in front. Mr. Fjarlie hopes to get into the garden supply business, too, and this store will serve that purpose also. There is an 80x50 ft. warehouse for sacked concentrates, ingredients and finished feeds, and in the rear is the 24x50 ft. mill section. Trucks go alongside one side of the plant and rail cars on the other side.

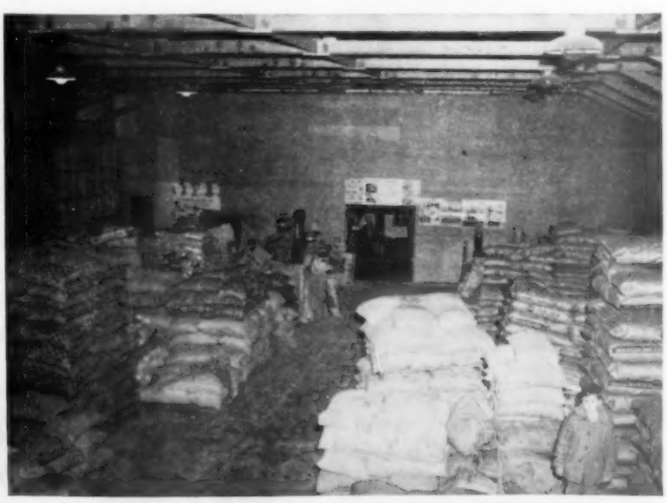
Equipment in the mill includes a Strong-Scott 1¼ ton horizontal batch mixer; a Strong-Scott molasses mixer; a Strong-Scott Power-Flo shaker for pellets; a Prater Pulverizer hammermill; an Oliver pellet mill; a Strong-Scott vertical pellet cooler; three Air Conveyor, Inc., pneumatic units (a 30 h.p. unit for unloading grain and transferring these materials in outside storage into the mill; one 15 h.p. duo-phase airlift taking feed from the mixer; and a 15 h.p. unit elevating pellets from the pellet cooler); an electrical remote control distributor to distribute incoming materials to the grain tanks and, after transferring, to grinding bins; first floor manual cable controls, operating headhouse valves to direct movement of materials into some of the interior bins such as the mixed feed holding bins; bin level indicators on all bins; outside Parkersburg bolted steel tanks for grain and concentrates; interior grinding, mixing, bulk feed and other bins; a push-button control panel for batching and mixing; a belt conveyor and truck scale for loading bulk feed into a Highway Equipment Co. bulk truck; a Richardson bagging scale; a Clark forklift



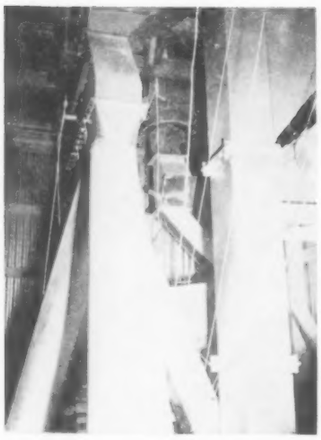
Shown here are manual controls for bin valves in the headhouse. Distribution of materials into mixing and other bins is controlled from here. To the left may be seen the belt conveyor which takes finished feed from bulk bins for loading into a bulk truck on a truck scale. All bins have bin level indicators.



This photo shows the tops of outside grain and concentrate tanks, the headhouse and airlifts and cyclones atop the mill. The mill has three airlift units, for unloading and movement of bulk materials within the mill. Only one elevator leg is used, for elevation of molasses feeds. An electric remote control distributor controls movement of incoming grain and concentrate into the storage tanks and the transfer of grain into the mill.



A view of part of the 50x80 foot concrete floor warehouse located between the office and the mill section. Finished feeds and concentrates and other ingredients in sacks are stored here. A forklift truck and pallets are used for movement of sacked feeds. The building is constructed of corrugated iron and aluminum over wood trusses and frame.



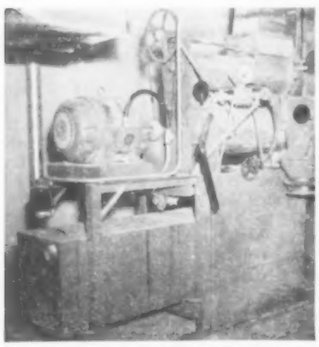
This picture in the headhouse includes the mill's one elevator leg, for elevation of feeds from the molasses mixer. Partly visible here is the Strong-Scott shaker for screening pellets.

truck for handling sacked concentrates and finished feeds; an 80-ton molasses storage tank in the basement.

Soil conditions where the mill was built were critical. This dictated a minimum depth of any pits and basements. Actually, this problem required the mill section to be 4 ft. above the warehouse level, and a ramp between the two sections was built for use in trucking sacked materials.

Air Unloading

Air unloading of grain and soft feed concentrates from rail cars and trucks was used to save digging. Use



Molasses feeds are mixed on this Strong-Scott molasses mixer. The feed discharges into the mill's one elevator leg, carrying the feed to bins over the pellet mill, sack-off or bulk loading out.

Grain is ground on this Prater Pulverizer hammermill. There are four grain processing bins which are fed by air from the storage tanks. The ground grain is blown to the top of the mill for distribution to mixing bins.

of air also made it possible to cut down on the building height and the number of horizontal conveyors.

There are three bolted steel grain tanks, each holding 100 tons, erected on a heavy "floating" foundation. Another outside storage tank holds 20 tons of concentrate. A 30 h.p. airlift unloads materials into these tanks and also transfers grain into the main mill.

Mr. Fjarlie and the engineers, in working out the mill flow, had these objectives in mind: (1) to eliminate multiple handling of materials, (2) to reduce labor costs, (3) to produce either bulk or sacked feeds.

The mill flow was described as follows:

After unloading by air—which Mr. Fjarlie calls the "best way to handle materials"—grain is transferred by air to a grain cleaner over the grinding bins. This also can be used to clean seed and is spouted also to a treater in the spring and fall seasons.

There are three bins over the grinder each of 12-ton capacity. A bin also has been provided for a barley roll to be installed in the future. Ground grain is elevated to bins over the hopper scale or to sack-off.

Batching and Mixing

All batches are pre-weighed through a 3,000-lb. hopper scale with the batching controlled on a push-button panel. There are five ground grain and soybean meal bins of 7 to 10-ton capacity with air gates over the batching scale. Dairy premix from the 20-ton outside concentrate tank is moved by screw conveyor into the hopper scale. These bins, like others, are equipped with bin level indicators. Sacked concentrates and other ingredients are cut into the mixer through grates by the control panel.

Plans also have been made for a millrun bin to feed by screw conveyor to the hopper scale.

The hopper scale discharges into a 1½-ton horizontal mixer. The mixer is discharged by a 15 h.p. duo-phase airlift. An air unit was chosen because of protection against contamination and because one system both elevates and moves horizontally. The airlift discharges through valves to bins over the pellet mill, molasses mixer or sack-off or to bulk truck bins.

Molasses Equipment

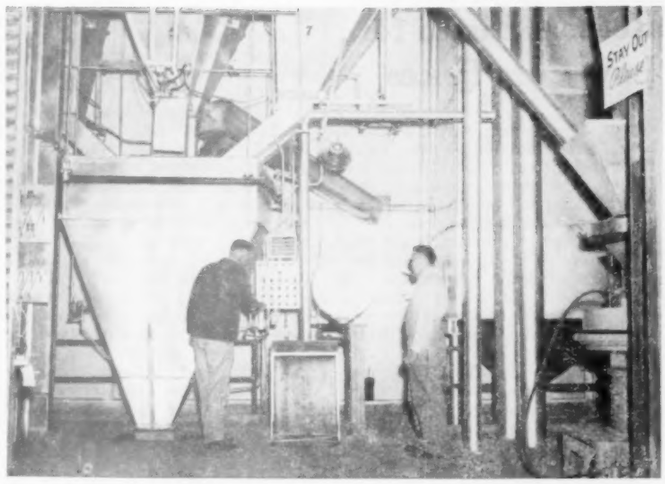
The molasses mixer incorporates various features, including variable feed, heat control and float switch. This mixer discharges into the mill's one bucket elevator leg, carrying the feed to bins over the pellet mill, sack-off or bulk loading out.

A 50 h.p. pellet mill is used with horizontal table and variable speed cutter knife. It is said to handle a wide range of feeds satisfactorily. A 15 h.p. steam generator in the basement provides steam for the pellet mill. The mill discharges to a vertical cooler with a variable discharge rate, in the basement.

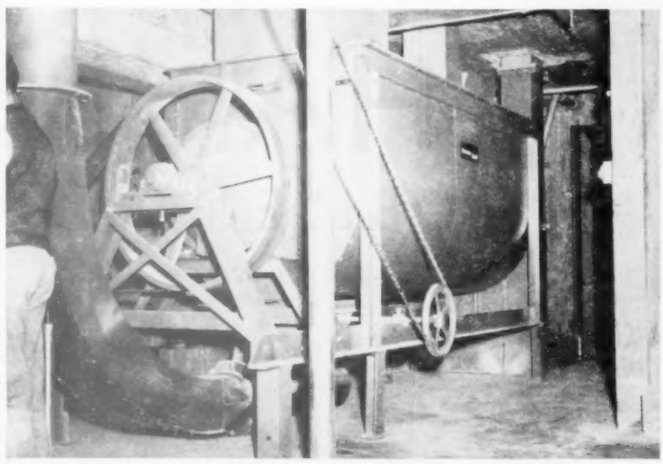
The cooler discharges to a 15 h.p. airlift elevating the pellets to a high-speed scalper overhead. Fines are returned to the pellet mill from the scalper and cooler fan. Finished pellets go either to bulk bins or to sack-off. The entire mill operation is readily controlled from a central area which includes the batching control panel, controls for movement of incoming ingredients and materials being transferred into the mill, and manual controls operating bin valves in the headhouse. An operator at this point can run the mixing operation, put in sacked concentrates and transfer materials in the mill. Also, the hammermill can be seen from the first floor, the molasses mixer can be watched, and the pellet mill and other facilities are adjacent to the mill's nerve center.

Handling Finished Feed

Sacked feeds are packed with a semi-automatic scale. The feed goes on to pallets for movement by fork



Harold Fjarlie (left) is shown in the control center of the new mill. He is at a push-button panel for control of the batching and mixing operation. Also in the photo are the 3,000-lb. hopper scale, scale dial and dump sink for addition of sacked concentrates and ingredients. There are five ingredient bins with air gates over the hopper scale, and dairy premix from a concentrate tank is moved by a screw conveyor, overhead in this picture, to the hopper scale. In back of the area shown here is a control panel for an electric remote control distributor to direct movement of incoming and transferred materials. The pellet mill is partly visible to the right and manual bin controls to the left.

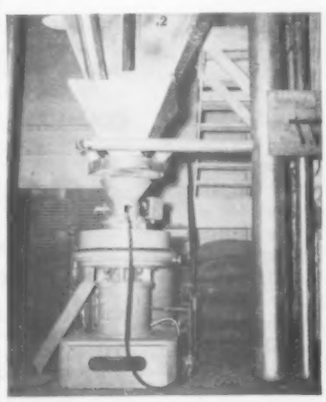


Mixing is done in a 1½-ton Strong-Scott horizontal batch mixer. The mixer discharges into an airlift, which elevates the feed for distribution to bins over the pellet mill, molasses mixer, sack-off or bulk loading out. The operations are controlled with combination semi-automatic and manual systems. Two men operate the entire plant with ease.

truck to the warehouse and/or loading out.

Bulk feed goes into one of two 10-ton bulk bins. These bins discharge to a belt conveyor to load the bulk truck at a rapid rate. An air-unloading bulk feed body is used to deliver bulk feed.

Sacked feeds and sacked ingredients and concentrates are stored in the 50x80 ft. warehouse, which has a concrete floor. A ramp between the



Feeds are pelleted on a 50 h.p. Oliver pellet mill. The pellets go through a vertical cooler in the basement and then are elevated by airlift to a high-speed scalper overhead.

mill section and warehouse, each at a different level, is used for hand or fork trucks.

Poultry Modernization Plan Set in Virginia

NATURAL BRIDGE, VA.—A full-scale modernization and development program for Virginia's $100 million poultry industry was launched officially at a recent meeting of the board of directors of the Virginia State Poultry Federation.

The board gave its endorsement to a three-phase program developed by a special federation committee. The plan is aimed at boosting the returns to Virginia farmers from poultry and egg production, the state's leading cash farm income source for more than a decade.

The committee, made up of some 30 poultry leaders from all production areas of the state, met earlier at Charlottesville and set up three broad objectives considered essential to the continued progress and sound growth of Virginia's poultry industry. The objectives are (1) to encourage adequate expansion and modernization of poultry buildings and equipment to meet present industry and consumer needs, (2) to secure adequate financial backing for a sound development program and (3) to stimulate greater interest among producers and the general public in capitalizing on existing opportunities in "America's fastest growing agricultural industry."

Reasons Listed for Low Corn Prices

URBANA, ILL.—Five reasons why recent corn prices were 10 to 15¢ lower than those of a year before have been listed by the University of Illinois agricultural economist.

L. H. Simerl gave the following reasons for the lower prices:

1. Supplies of corn are larger than they were a year ago. Farmers have 5% more, and the government 10% more. Total stocks are up around 7%, and the western corn belt generally is better supplied with corn than it was a year ago.

2. Supplies of other feed grains, particularly sorghums, are greater than a year ago. Supplies of these other feed grains combined are about half again as large as last year.

3. Much less corn is eligible for price support. Fewer farmers complied with allotments, and much of the 1957 crop was too wet to qualify for loans.

4. Price support levels are lower than a year ago. The average support rate for compliance corn is $1.40, 10¢ lower; and for noncompliance corn, $1.10, 15¢ lower.

5. The soft and uncertain business situation also probably weakens the market for corn.

Against these price-depressing forces, however, he lists a few price supporting trends:

1. The government has been selling less corn—only 100 million bushels since Oct. 1, compared with 140 million a year before.

2. Exports have increased, amounting to 78 million bushels since Oct. 1, compared with 57 million a year before.

3. Prices of livestock are higher than they were last year.

4. There is a stronger demand in the South and East for feed from the corn belt than there was a year ago.

In a look ahead, Mr. Simerl sees little additional 1957 corn placed under price support because prices are already close to the support levels for noncompliance corn. He also sees these possibilities:

The government may have to step up its sales of corn in order to prevent losses from spoilage. Livestock prices will not show their usual price advances this spring and summer. The prospective acreage of corn for 1958 is about 2% larger than for 1957. The price support level for the 1958 crop seems likely to be lower than that for the 1957 crop.

A change in government policy regarding export sales might lift market prices, he said. Heretofore, the CCC has been selling its own stocks of corn for export. He said plans are being made to change to the payment of export subsidies as is done with wheat. The subsidies would be paid in corn from government stocks. Whether such a change would boost market prices would depend on the rate and amount of subsidy payments, he said.

Iowa Plans Conference For Feed Salesmen

AMES, IOWA—Arrangements were completed here recently for a feed salesmen's conference to be held in September.

Included in the planning is a half day of discussion Sept. 11 between Iowa State College staff members and advertising and sales managers of feed manufacturing firms. The following day, Sept. 12, will be devoted to a conference for feed salesmen.

An industry committee will be selected to work with a college committee on details of the program. A preliminary survey of manufacturers has indicated full support to the conference, according to a Midwest Feed Manufacturers Assn. bulletin which reported the planning session.

Joe E. Smith

HONORED—Joe E. Smith, manager of the Yoakum (Texas) Gin & Feed Co., recently was honored for having completed 45 years of continuous service with the firm. The company held a day-long open house. Manufacturers participating included Armo Mills, Quaker Oats Co., Cuero Cotton & Manufacturing Co., Armour Fertilizer Works, Saint & Co., United Salt Co., Consolidated Chemical Industries, Green Light Insecticides and several local concerns. The celebration for Mr. Smith also marked the company's completion of 45 years in business. "I've seen a great many changes and improvements in feeds and feeding in these 45 years," Mr. Smith said, "and I hope to remain here and watch the feed parade for many more years."

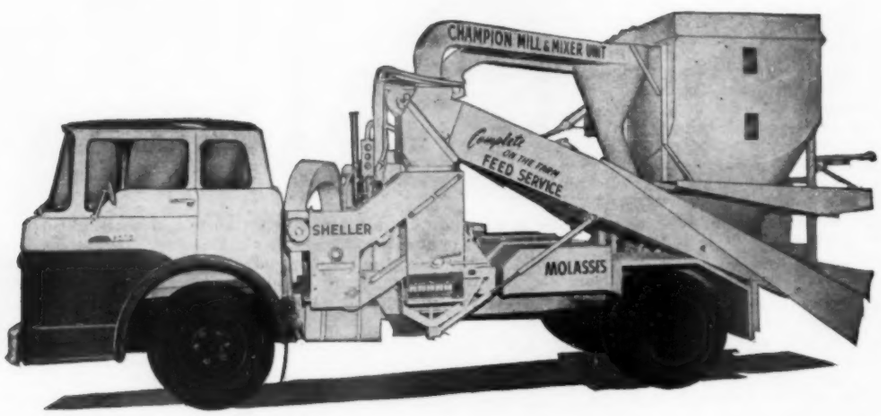
Pig Sale Planned

LEXINGTON, KY.—Several hundred pigs are expected at the feeder pig sale here May 14, according to H. L. Grannis, president of the newly-organized Northeastern Kentucky Feeder Pig Cooperative Assn. Mr. Grannis said the event is the organization's first in the eleven-county area it serves.

BUILDS STORAGE ADDITION

GUYMON, OKLA.—Knutson Elevators, Guymon, has begun construction on an addition of eight grain storage tanks totaling 809,000 bu. capacity. Guy Bennett, manager, said the addition will bring the total storage capacity of the elevator to 1,859,000 bu. The contract was let to Johnson Elevator Co., Salina, Kansas.

CHAMPION
MOBILE EQUIPMENT



The Feed Industry's Greatest Mobile Value!

Now, with CHAMPION'S new sheller arrangement, you can furnish a more complete ON-THE-FARM feed service for your customers. With this arrangement, ear corn and grain are fed right into the hammermill or into the sheller—without an auxiliary feeder. This is the simplest, most trouble-free, sheller arrangement ever offered to the mobile feed industry. Two tons of concentrates can be loaded on the platform between the mill and mixer unit—no need for a second truck to haul concentrates! With its big, 2 to 3 tons mixing capacity, CHAMPION will mix more feed in less time, and this capacity provides a convenient bulk delivery when necessary—another reason why CHAMPION will increase your feed sales.

EXPERIENCED PERFORMANCE AT A REASONABLE PRICE

CHAMPION'S twenty-eight years of manufacturing experience brings to the mobile industry this fine, simple and rugged unit at a fair and honest price.

COMPLETE CHAMPION DELUXE UNIT
MOUNTED ON YOUR TRUCK

$9200.00
INCLUDING MOLASSES EQUIPMENT

$7950.00 Without Molasses Equipment

CHAMPION'S experienced performance is your assurance of TOP QUALITY AND TOP VALUE. Ask the man who knows—ask a Champion operator.

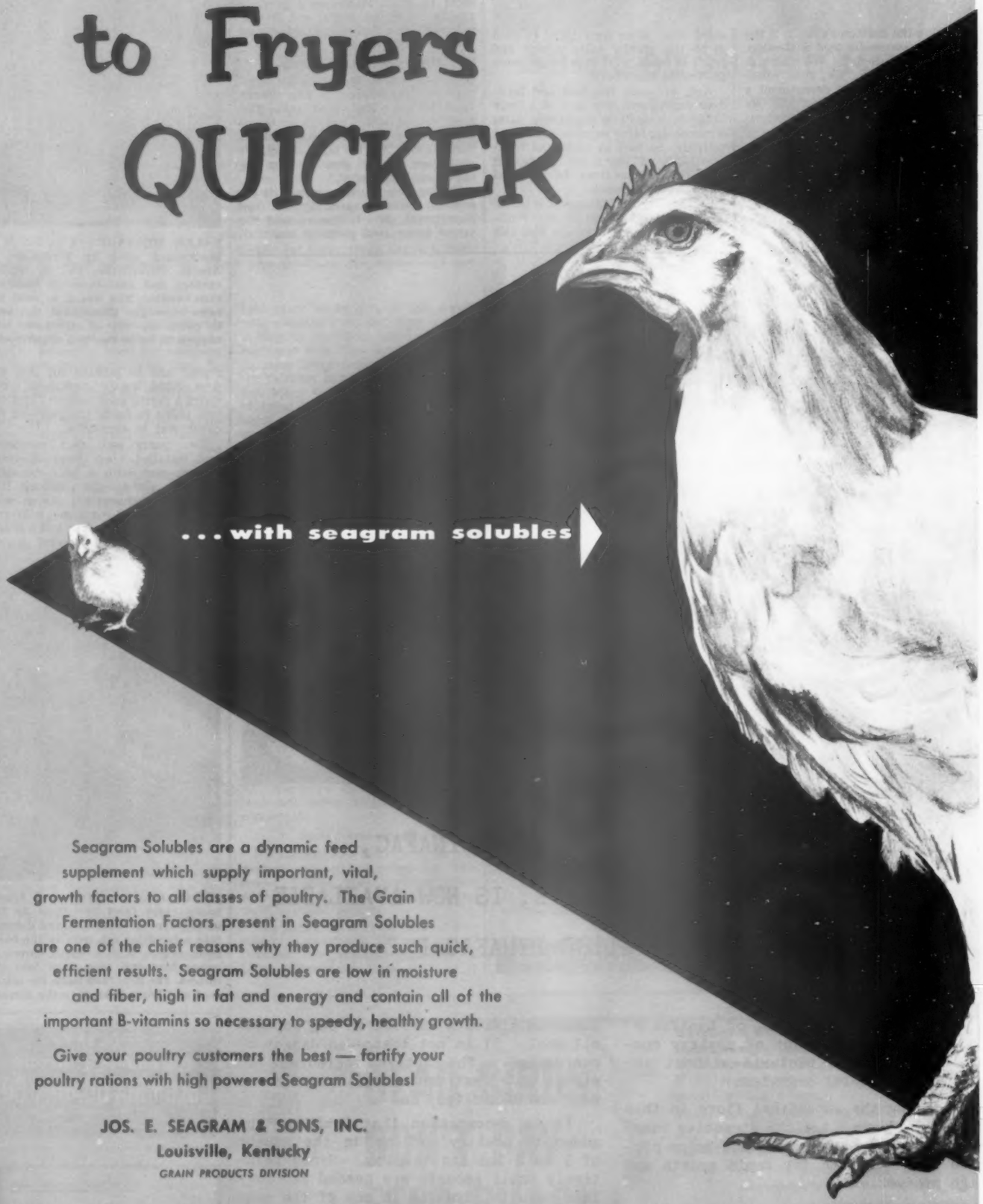
Let us help you survey the potential sales in your area

CHAMPION PORTABLE MILL CO.
2109 COMO AVENUE SOUTHEAST - MINNEAPOLIS 14, MINNESOTA

NELLIS
FEED COMPANY
Brokers
of Feed Ingredients
4010 Board of Trade Bldg.
WAbash 2-7322
TWX 623
Chicago 4, Ill.

IT'S ECONOMY WISE TO JERSEEIZE WITH JERSEE
VITAL-MIN
a Pre-Mix
VITAMINS MINERALS
Made by the founders of VITAMINIZED and MINERALIZED CONCENTRATES since 1922.
Jobbers and Warehouses From Coast to Coast
THE JERSEE CO. MINNEAPOLIS MINN.
WRITE TODAY FOR DEALERS SALES HELPS!

Chicks to Fryers QUICKER



. . . with seagram solubles

Seagram Solubles are a dynamic feed supplement which supply important, vital, growth factors to all classes of poultry. The Grain Fermentation Factors present in Seagram Solubles are one of the chief reasons why they produce such quick, efficient results. Seagram Solubles are low in moisture and fiber, high in fat and energy and contain all of the important B-vitamins so necessary to speedy, healthy growth.

Give your poultry customers the best — fortify your poultry rations with high powered Seagram Solubles!

JOS. E. SEAGRAM & SONS, INC.
Louisville, Kentucky
GRAIN PRODUCTS DIVISION

Seagram SERVICE TO AGRICULTURE

Firm Adds Facilities to Build Sales, Serve Customers Better

By Al P. Nelson
Feedstuffs Special Writer

Meeting the customer's needs is the key to any successful feed dealership. It is the key used by Whitmore & Arnold, Purcellville, Va., firm which found in a strong feed department a good supplemental income to its basic return as a farm implement dealer.

The firm began handling feed in 1940, and for many years sold complete, formula feeds. But two years ago, the firm invested $20,000 in a plant modernization program.

R. L. Arnold and W. L. Whitmore, partners in the firm, had earlier decided that "if we were going to cash in on the greater sales volume and profit in feeds, we'd have to get some processing machinery."

And, although the feed and fertilizer department is a part of a large firm which deals in appliances, farm implements, farm supplies and other activities as well as feeds and fertilizer, 25% of the firm's $1 million volume has come from the feed and fertilizer department.

The answer to this success is pointed out in a statement by Mr. Whitmore. "To make a business like this succeed," he said, "it must be departmentalized so that someone can give it full attention at all times."

That full-time attention is provided at Whitmore & Arnold by Ferron Duvall and W. C. Welch, "two excellent men," according to Mr. Whitmore.

The feed and fertilizer division of the business is housed in a large building directly behind the implement building. It has been growing rapidly in recent years, and it now has with it a full-fledged farm and garden supply store.

Department Brings Traffic

"That's where the store belongs," says Mr. Whitmore. "It can benefit from the heavy daily feed traffic. The feed department attracts a heavy traffic each year, and much of it finds its way into the farm implement showroom, repair shop or our big appliance department."

Telling how the firm turned its attention toward expanding the feed department, Mr. Whitmore said the brand name feed program was "all right," and he pointed out that the firm could have continued along "with a pretty good volume." But the real profit in feeds, the partners decided, was in expansion.

Two years ago, they purchased and installed two Myers-Sherman mixers, each with a 3-ton capacity, and they also bought a 26-inch, 100-h.p. Fords hammermill. Along with the mixers were purchased a Myers-Sherman molasses mixer and a Salem Weighmaster. Two Winslow hand

SALES MESSAGE — Shown is a blackboard used by Whitmore & Arnold, Purcellville, Va., to remind visitors and customers of seasonal merchandise. The board is used for sales messages throughout the year to catch the eye of customers who happen to be in the feed department.

TRUCK DUMP—Whitmore & Arnold hauls grain from the farm to the mill, where it is hoisted and dumped into a receiving pit, goes to the basement where it is ground, moves to upper bins and then back into the mixers. The firm then loads the mixed feed and hauls it back to the farmer.

ARMOUR

DYNAFAC

NEW DRUG FOR OLD ENVIRONMENTS -- DYNAFAC,
THE CHEMOBIOTIC FEED ADDITIVE, IS NOW AVAILABLE
FOR POULTRY -- IT IS CALLED DYNAFAC-P

The chemobiotic action of Dynafac-P* in the intestinal tract of poultry controls undesirable bacteria without impairing beneficial organisms.

Altering the intestinal flora in this manner produces a healthy digestive canal —improves feed efficiency and helps provide better health for rapid growth and high production.

There is no evidence that microorganisms develop resistance to Dynafac. This may be due to the insolubility of this new chemobiotic in the intestinal tract. This is important because of the proven drug resistance of some organisms.

Dynafac-P contains 20% tetra alkylammonium stearate carried in 80% soybean oil meal. It is not toxic—no danger of overdosage. The active ingredient is stable under extreme conditions of heat, cold and humidity.

It is recommended that Dynafac-P be added to poultry rations in the amount of 1 to 2 lbs. to the ton. Since relatively small amounts are needed for maximum results, Dynafac is one of the most inexpensive feed additives yet offered.

Dynafac is distributed nationally for Armour by the Chemical Department, McKesson & Robbins, Inc. For further information contact your nearest McKesson chemical warehouse. Armour and Company, Union Stock Yards, Chicago.

*Armour brand tetra alkylammonium stearate

SPECIFY
Columbia Calcium
COLUMBIA QUARRY CO.
1007 Washington Ave.
ST. LOUIS 1, MO.

Cable Address: Parrheim
P&H
GRAIN • FLOUR • FEEDS •
Domestic & Export
PARRISH & HEIMBECKER
LIMITED
Export Office — TORONTO, CANADA
WINNIPEG — CALGARY — MONTREAL

FEED, FERTILIZER BUILDING—A feed and fertilizer business housed in this building provides a fourth of the gross sales of Whitmore & Arnold, Purcellville, Va., firm which also deals in farm implements, appliances and other lines. The building above lies behind the firm's main building. The two large windows at the front are display windows for the farm and garden supply store, which is also a part of the feed and fertilizer department. After handling feeds as a minor part of the business for many years, the firm modernized the feed department and found good profits in the department two years ago.

scales are also used. Workers can sack off whatever number of pounds the farmers want. The Salem Weighmaster is largely used for weighing grain and ingredients going into the mixers.

At the same time the dealers purchased and installed this equipment, they also bought a Ferrell grain cleaner and a Ferrell seed treater. A receiving dump bin for grains was also installed in the basement area, and a truck hoist for unloading trucked grain was set up.

Whitmore & Arnold then offered to haul grain from farms to its new feed plant to be ground and mixed with concentrates, and then to haul it back to the farm again, either in bag or in bulk. This service appealed to many large dairy, hog and poultry farmers interested in labor saving. Many farmers liked the feature of being able to include their own home grown grains in the feed they used.

MOLASSES MIXER—Whitmore & Arnold saw feed processing as a potential sales builder two years ago, and purchased $20,000 worth of machinery to gain those sales. One of the pieces of equipment was this Myers-Sherman molasses blender attached to the Myers-Sherman mixers.

So Whitmore & Arnold began getting more feed business. The firm continues to sell a great deal of complete feed in bags, too, because many customers who have limited numbers of chickens and hogs do not grow their own grains and thus have need of a complete feed. But at the same time, Whitmore & Arnold is now getting as customers more of the large scale operation farmers. The implement and feed firm can thus compete with other feed retailers and mills in the area for volume business.

While the firm sells in bulk, it does not as yet have bulk equipment. It has a Harvest Handler drag which is used to take the feed into a big truck from the mixers. Then, when the feed is delivered to the farm, the drag is used again to convey the feed to the spot where the farmer wants it. Usually the feed has to be shoveled from the truck into the drag. Mr. Whitmore and Mr. Arnold have been considering the purchase of bulk equipment.

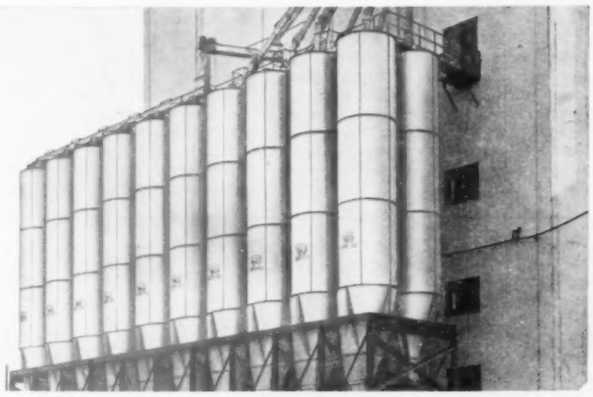
Sells Name Brand

Purina complete formula feeds and concentrates are handled by this dealer. Purina sales representatives work with the firm in programming merchandising policies.

The firm sells a great deal of fertilizer, especially in fall and spring. Because the fertilizer customer is often a farmer who buys feed here, it

DAY

BULK STORAGE NEWS



A battery of 20 DAY vertical bulk storage tanks serving packaging line as well as truck and rail car loading operation. Each tank section holds approximately a carload of ingredients.

DAY BULK STORAGE TANKS

No other method stores bulk materials at lower cost

SAVINGS is one of the big advantages of DAY bulk storage and material handling equipment. Typical reports from DAY bulk tank owners tell of savings from 25¢ to 35¢ per hundred pounds of material handled. With DAY tanks, you save container or bag costs, you save labor, you save storage space and you save "invisible loss" because there's no spillage or breakage. DAY tanks improve plant efficiency and keep costs down.

For the most complete line of economical bulk tanks in vertical and horizontal styles, turn toDAY, now. Increase your plant's operating efficiency, lower material handling costs, improve sanitation and housekeeping with DAY bulk tanks. Free bulletin tells how to handle bulk material at lower cost with DAY units. Write toDAY for Bulletin 574.

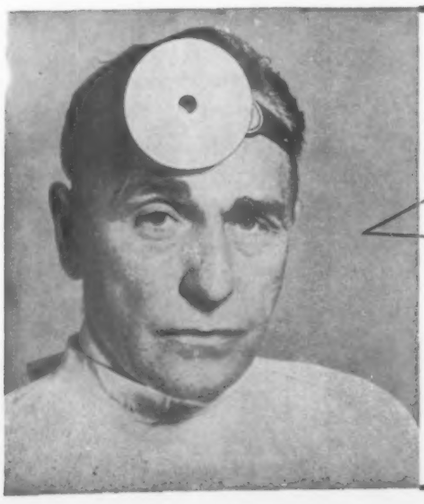
The DAY Company

SOLD in UNITED STATES by The DAY SALES Company 819 Third Ave. N.E., Minneapolis 13, Minn.

MADE and SOLD in CANADA by The DAY Company of Canada Limited 17 Brydon Drive, Rexdale (Toronto), Ont.

Representatives in Principal Cities

EQUIPMENT ONLY OR A COMPLETE SYSTEM



DEAD BIRDS DON'T PAY FEED BILLS!

HETEROCHEMICAL CORPORATION
111 E. HAWTHORNE AVENUE
Valley Stream, Long Island, N. Y.
LOcust 1-8225

hetrogen K®
Menadione Sodium Bisulfite

*U.S. Patents 2,331,808 & 2,367,302

Hetrogen K® Fortified Feed Banishes Hemorrhagic Diseases Due to Vitamin K Deficiency

Millions of broilers reach market every month at top prices.

Flock mortality rate is almost zero.

ARE YOU OFFERING YOUR CUSTOMERS POULTRY FEED WITH hetrogen K®*?

Menadione Sodium Bisulfite
. . . the effective water soluble VITAMIN K

WRITE FOR NEW VITAMIN K RESEARCH REPORTS AND COMPLETE INFORMATION ON HETROGEN K in Free Flowing or Pre-Mix forms.

USE HANDY COUPON:

Dept. FS-419

Please rush complete information on Hetrogen K and latest reports on Vitamin K research.

Firm Name.....

Individual.....

Address.....

.....

WEIGHING FEED—At left, W. C. Welch, one of the feed division managers, with a helper at right, stand at the Winslow hand scales used by Whitmore & Arnold to weigh feed as it comes out of the mixer. The weight is already set on the scales so that any quantity of feed for delivery can be weighed quickly.

is not difficult to contact him early enough so that he places his order for fertilizer in time to get the analysis fertilizer he wants and in time for plowing. Some farmers in the area now buy fertilizer for fall plowdown, thus lessening the amount of spring work which must be done. This practice, furthered in Whitmore & Arnold's merchandising policy, helps get business many months of the year.

"Our feed and fertilizer business, just as our white goods department, helps us to get a better spread of volume over a 12-month period than if we handled farm implements alone," states Mr. Arnold. "All these lines together increase the daily traffic, and that traffic flow is very important in getting seasonal business and also impulse business."

The latest development in the Whitmore & Arnold feed and fertilizer division is the establishment of a full-fledged farm and garden supplies store. This occupies a former office space up front in the feed building. It is about 20 by 35 ft., and it is finished in knotty pine, has fluorescent lighting, good islands and wall display shelves.

Varied Merchandise

In this store, some types of farm hardware are displayed as well as farm chemicals, sprayers, insecticides, garden and barn tools, poultry and livestock remedies, grass seed and plant food, garden tractors, power mowers, and the like.

W. G. Welch, one of the feed division managers, says that sales of garden tractors and power mowers have necessitated establishing a small motor repair department in the nearby implement shop. The shop is crowded with work and with customers especially in spring when demand for mowers and garden tractors is strong. While several small motor experts are handling the work in this special shop, the entire service crew of over 20 men is available in an emergency.

"Many a man brings a power mower into our service shop, walks into the farm supplies store and buys a couple bags of plant food, seeds and garden tools," says Mr. Welch. "Some of these customers also have a few chickens or hogs and buy from one to three bags of feed on the same call."

Quite a few suburban housewives come in station wagons for garden supply items, and also for chicken, rabbit and other feed, indicating the growing interest of half-acre lot dwellers in agricultural experimenting.

"Our feed, fertilizer and garden supplies division is serving farmers who have large feeding operations, including the growing of grain, small farmers who have limited flocks or herds, and the homeowner who has a sizeable lawn and garden," says Mr. Welch. "We are so set up that we can cater to all these groups effectively to swell our total volume during the year."

GOOD PASTURE PROSPECTS NOTED

WASHINGTON—Prospects for the 1958 pasture season are the best for the past nine years, the U.S. Department of Agriculture says in its latest crop report. The condition of pastures for the country as a whole was 83% of normal on April 1, the highest condition reported since 1949. The high condition reflects the favorable moisture condition existing over much of the country. Pasture grazing up to April 1 was limited except for localized areas in the Southeast, south central states and Pacific Northwest. In most areas of the country, pastures went into the 1957-58 winter in good condition and with favorable moisture since that time, prospects appear good for favorable growth during 1958.

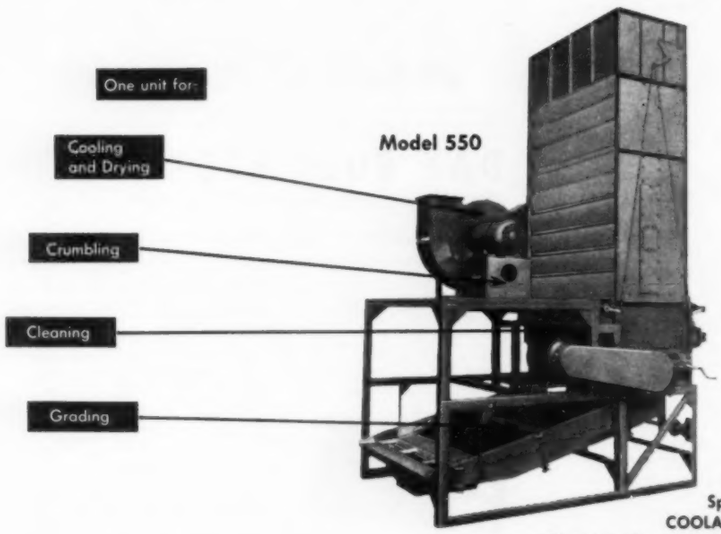
Bale Density Invention

PORTLAND, ORE. — Robert H. Collins, a Brownsville, Ore., farmer, has added another to his list of patents. Mr. Collins, who has patented a better way to tie knots in hay baling twine, has now invented a hay bale density control and, if it works, he is ready to challenge hay pellet producers in their attempts to move into the cattle feed picture. The Oregon inventor points out that the use of his knotter and new density control will permit gains of up to 50% in storage space over old bales. He also insists he can eliminate the buckling of bales, a common problem.

SW Data Sheet

Sprout-Waldron

COOLAIRE Assembly



Sprout-Waldron COOLAIRE Assembly with automatic pellet flow control and *hinged louvers for automatic air flow control.

*Patented

The Sprout-Waldron "Coolaire" assembly is a compact unit that cools and dries hot pellets, cleans, grades and, when desired, also crumblizes. Only one foundation is required and all drives, motors and motor supports are furnished as a part of the package unit. No expensive interconnecting spouting is required. It will handle pellets from 3/32" to 1"; saves floor space, and can economically be enlarged to increase capacity.

specifications

MODEL	OVERALL HEIGHT	FAN MOTOR	
		Hp.	Rpm.
250	12′ 1¼″	10	1800
375	14′ 4¼″	10	1800
500	16′ 7¼″	15	1800
625	18′ 10¼″	15	1800

construction details

Cooler and Dryer—Critical parts in contact with moisture laden air are of stainless steel. Patented, hinged louvers give automatic air flow control. Improved design regulates pellet flow and results in the cooler being full at all times. The discharge from the cooler is exactly equal to the input. The operation is mechanical and automatic.

Crumblizer—Built with anti-friction bearings. Roll assemblies can be removed for recorrugation without disturbing spouting or housing. Built-in by-pass valve enables operator to switch from crumbles to pellets. Rolls are spring mounted; adjustments simple.

Cleaner and Grader—With scalper—handles both pellets and crumbles without changing screens. Utilizes a double deck cleaning and grating shoe which is shaken by a unique positive, self-balancing drive for efficient grading and cleaning.

COOLAIRE assembly elements are a full five feet wide, assuring even flow in all elements. Units are shipped in large sections, ready to bolt together; no expensive installation costs.

FD/103

SPROUT-WALDRON

The Best in Processing Equipment Since 1866

MUNCY, PENNSYLVANIA, U.S.A.

Modern equipment for—size reduction • mixing and blending • bulk handling equipment • size classification • pelleting and cubing

PROVED ON-THE-FARM VICTOR FEEDS

THE CRETE MILLS CRETE, NEBRASKA

Fleischmann's F-I-D-Y IRRADIATED DRY YEAST RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

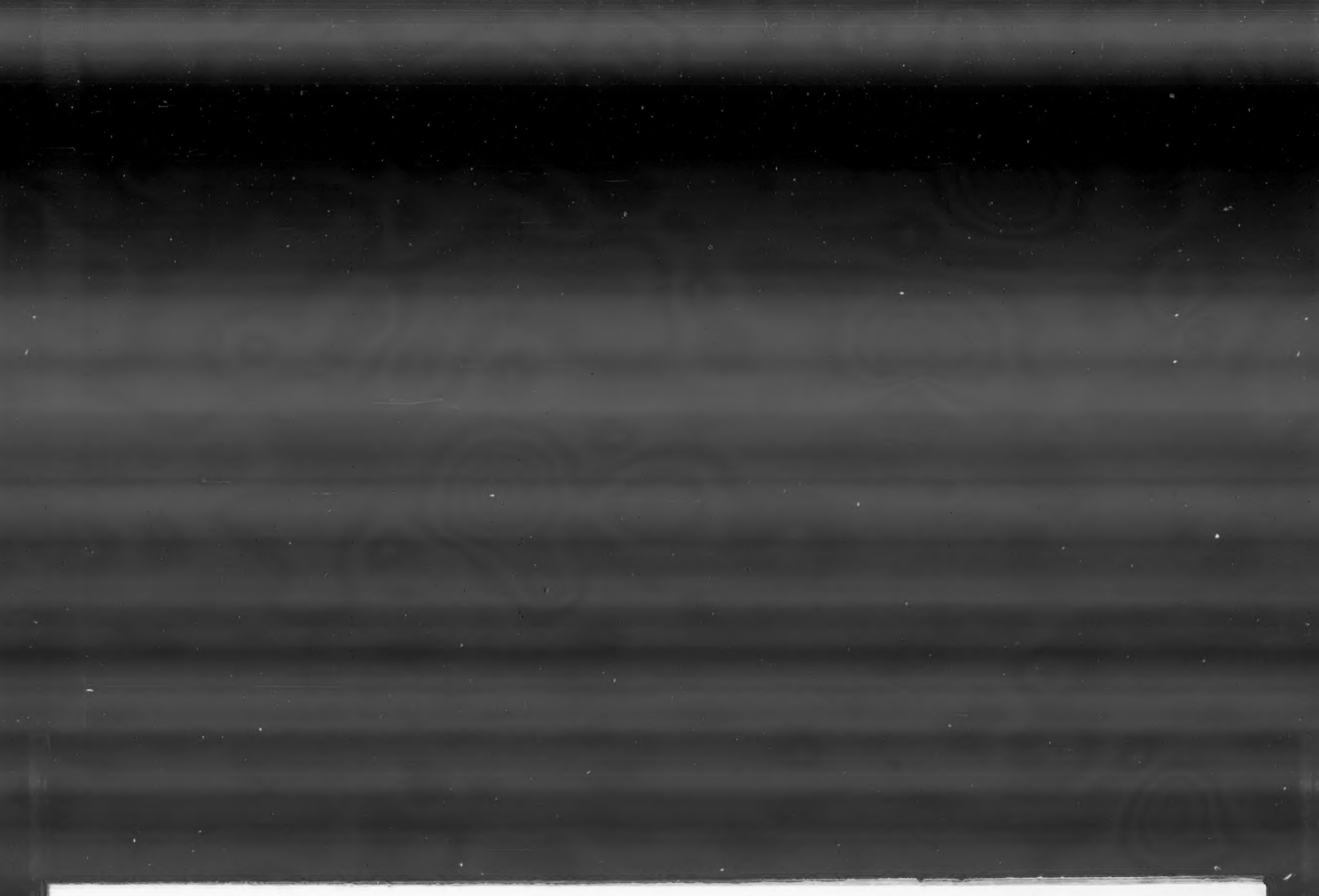
CREATIVE RESEARCH and ANALYSIS

ANNOUNCING DETERMINATION OF VITAMIN ACTIVITY IN FEEDS AND FEED INGREDIENTS By Chemical Methods

Write Today for Brochure

Describes laboratory services for food, beverage, pharmaceutical, chemical, cosmetic and feed industries, as well as services to general industry

ROSNER-HIXSON LABORATORIES and Laboratory of Vitamin Technology div. 7737 South Chicago Ave., Chicago 19, Ill.



LOW-LEVEL nf-180® brand of furazolidone prevents production slumps

. . . even in the best of flocks

Penny-a-month nf-180 feeding helps your birds produce extra dollars of egg profit

Even though you're already taking advantage of good breeding, good feeding and expert management, you still can gain profit-plus performance by putting your birds on a feed fortified with a low level of nf-180. Painstaking research and poultrymen's records show you can *replace* relatively higher levels of antibiotics, arsenicals or other drugs with lower levels of nf-180 and come out dollars ahead.

Increases egg production

Work at a midwestern university showed that the ½ pound level of nf-180 improved production 5.8 percent in caged Leghorns. Another 48-week feeding experiment conducted in an eastern egg-producing state with caged New Hampshires already under highly sanitary, "disease-free" conditions showed egg production improvement of 13.2 percent.

In southeastern tests, nf-180 gave an average improvement of 4 percent over unmedicated control birds, while oxytetracyline at *twice the level of furazolidone* produced a smaller improvement of 3 percent over the controls.

In work at an eastern laboratory, birds on nf-180 were about 6 percent higher in egg production at the end of 24 weeks, 5.4 percent higher at 32 weeks and 3.9 percent higher at 40 weeks.

Improves feed-egg ratio

Feeding trials from the midwest and from two commercial research organizations show nf-180 substantially improves feed-egg conversion. Typical economies of nf-180 low-level feeding were demonstrated by a test flock of a 130-birds in a commercial operation. During an 8½ month period these birds produced 113 *extra* dozens of eggs and saved 618.8 pounds of feed over an equal number of unmedicated control... ⅓ pound less feed was needed to produce a dozen eggs. With nf-180 delivering a 4 percent improvement in feed-egg ratio, you can expect 200 *extra eggs* per ton of feed from hens laying at 70 percent production.

Feeding low-level nf-180 continuously in 8 different tests improved the feed-egg ratio by 4.9 percent on the average. The high was 11.6 percent.

Gives better livability

Feeds containing low-level nf-180 cut mortality in laying flocks. Results from one midwestern university show a reduction in mortality from 33 percent to 6.7 percent. In another trial nf-180 saved 6 extra birds for every 100 on test compared to the control flock. By reducing mortality nf-180 saves two ways . . . (1) the market value of your layer plus (2) the egg income she produces.

Improves hatchability-fertility

Tests in the southwest show that feeding nf-180 increased the hatching percentage of fertile eggs 4.6 percent on the average. A 32-week feeding test at an eastern commercial laboratory also showed that continuous feeding of the ½ pound nf-180 level increased hatchability from 79 percent to 82 percent.

Protects against stress

Test comparisons demonstrate the positive effect of nf-180 in maintaining greater overall performance of birds under stress due to disease, nutrition and other causes. For example, where severe stress was present with New Hampshire hens on litter, nf-180 at the 1 pound level improved egg production 53.6 percent. The feed-egg conversion was improved 26.7 percent and hatchability was increased from 83.4 to 84.5 percent.

You can get results such as these because nf-180 is the medication that controls more poultry diseases than any other drug. At a continuous low level this potent disease-fighter does more to head off stress-induced troubles that squeeze production. It all adds up to lower-cost eggs, more profit in your pocket at the end of the year.

All these benefits are yours for

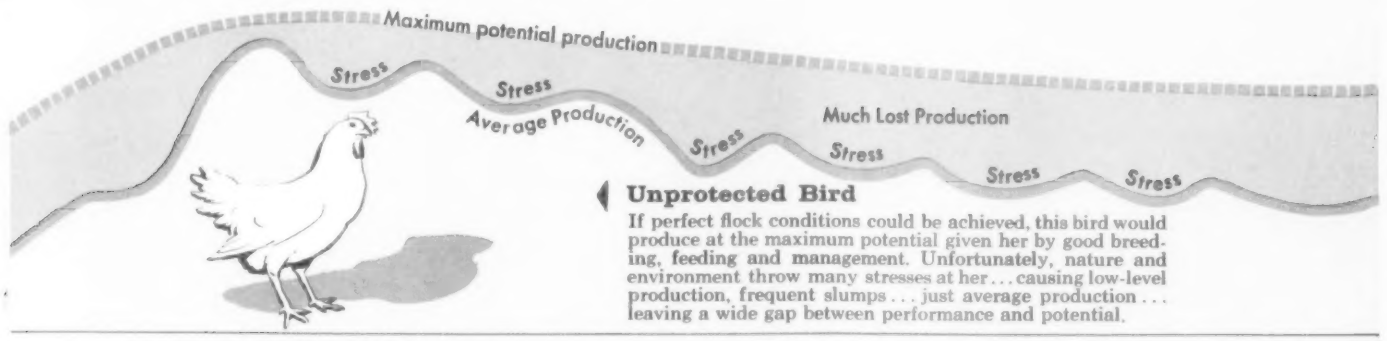
Penny-a-month

per bird

CONTINUOUS FEEDING

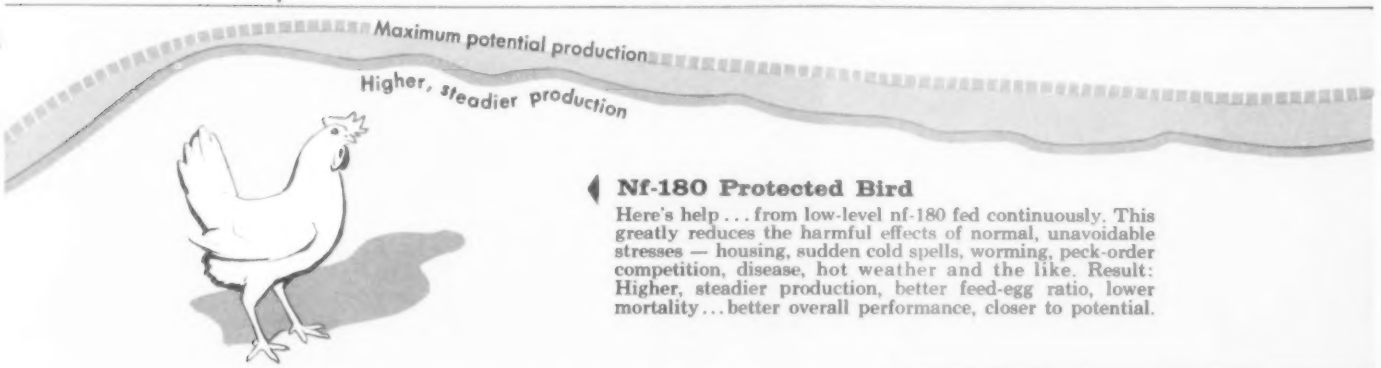
and boosts overall performance

and here's how it works . . .



Unprotected Bird

If perfect flock conditions could be achieved, this bird would produce at the maximum potential given her by good breeding, feeding and management. Unfortunately, nature and environment throw many stresses at her . . . causing low-level production, frequent slumps . . . just average production . . . leaving a wide gap between performance and potential.



Nf-180 Protected Bird

Here's help . . . from low-level nf-180 fed continuously. This greatly reduces the harmful effects of normal, unavoidable stresses — housing, sudden cold spells, worming, peck-order competition, disease, hot weather and the like. Result: Higher, steadier production, better feed-egg ratio, lower mortality . . . better overall performance, closer to potential.

. . . the payoff: typical results on 1,000 hens per month

1240 more eggs (36¢)

12.1% more premium eggs

360 lbs. less feed

7.25 extra layers saved

$37.20 extra profit

$5.54 extra profit

$22.40 saved

$5.44 saved

A well-managed commercial flock already at 72% production was divided to test results of an nf-180 medicated group against the other half continued without medication. Getting results from a feed additive to improve production beyond 72% isn't easy . . . but nf-180 did it. By adding up the dollar value of *improved production, more large and extra large eggs, better feed-egg ratio,* and *higher livability,* you see a net increase over medication cost of $60.00 per 1,000 hens per month. In effect, spend a penny-a-month per hen for nf-180 and get 6 cents extra profit. Figure this on your flock.

$60.79 extra income over nf-180 cost of $9.79

Questions and answers on Low-Level Continuous Feeding of layers

You'll know you are getting "low-level nf-180" in your feed when you see .00275% *furazolidone* on all-mash ration tags, or .0055% *furazolidone* on regular egg mash tags (fed 50-50 with grain).

If your layer feeds are locally mixed, your dealer can easily add nf-180 by obtaining New nf-180 Custom-Mix TEN for you. This contains the active drug, *furazolidone*. Follow mixing directions.

Q. Why does nf-180 improve production?

A. Nf-180 is effective against many harmful bacteria. Low-level nf-180 reduces the load of bacteria that cause secondary infections and sap egg production . . . puts birds in condition to make proper use of feeding, breeding and management . . . allows them to lay normally.

Q. Does nf-180 replace other medications added to feeds for stimulation of production?

A. Yes. Nf-180 can replace relatively higher gram-levels of other additives and save you money in the process. But it is also compatible with other additives and may be used with them.

Q. What about toxic and harmful after effects?

A. Nf-180 is non-toxic to all poultry, livestock and pets — does not build up in tissue.

Q. Can nf-180 medicated feeds be fed to breeder flocks?

A. Definitely yes . . . improves production, fertility and hatchability.

Q. When should higher levels of nf-180 be fed?

A. During the first week birds are housed and during any period of severe stresses or disease outbreaks. Nf-180 at the level of 100 grams furazolidone per ton prevents and controls more poultry diseases than any other drug.

Q. Are water medications necessary in addition to nf-180 in the feed?

A. Nf-180 fed continuously at low-level can save you money by replacing water medications. (See above). If a few birds are too sick to eat or drink, individually dose them with nf-180 Tablets and let nf-180 in the feed take over.

Q. Can low-level nf-180 be fed on a 50-50 mash and scratch program?

A. Yes . . . in this case the commercial egg mash should have 50 grams (.0055% furazolidone per ton to give you a 25 gram level in the complete ration when half grain is fed.

Get your feedman to help you put nf-180 to work boosting your egg profits

Higher egg profits are always welcome . . . always needed. Rare is the case where flock performance can't be improved — more eggs, less feed used per dozen, fewer death losses — it all adds up. Figures on improvements shown in this piece are on the conservative side. Dollar gains should show up even better where flocks have slipped to 60% production or less. Spending a penny-a-month per bird to get 6 cents extra profit or more per bird is worth going after. That's $60.00 or more on 1,000 hens per month. Get nf-180 in your feed. Your records will show you.

nf-180®
brand of
furazolidone

One of those lifesaving
nitrofurans
germ killers that last

HESS & CLARK, Inc.
ASHLAND, OHIO

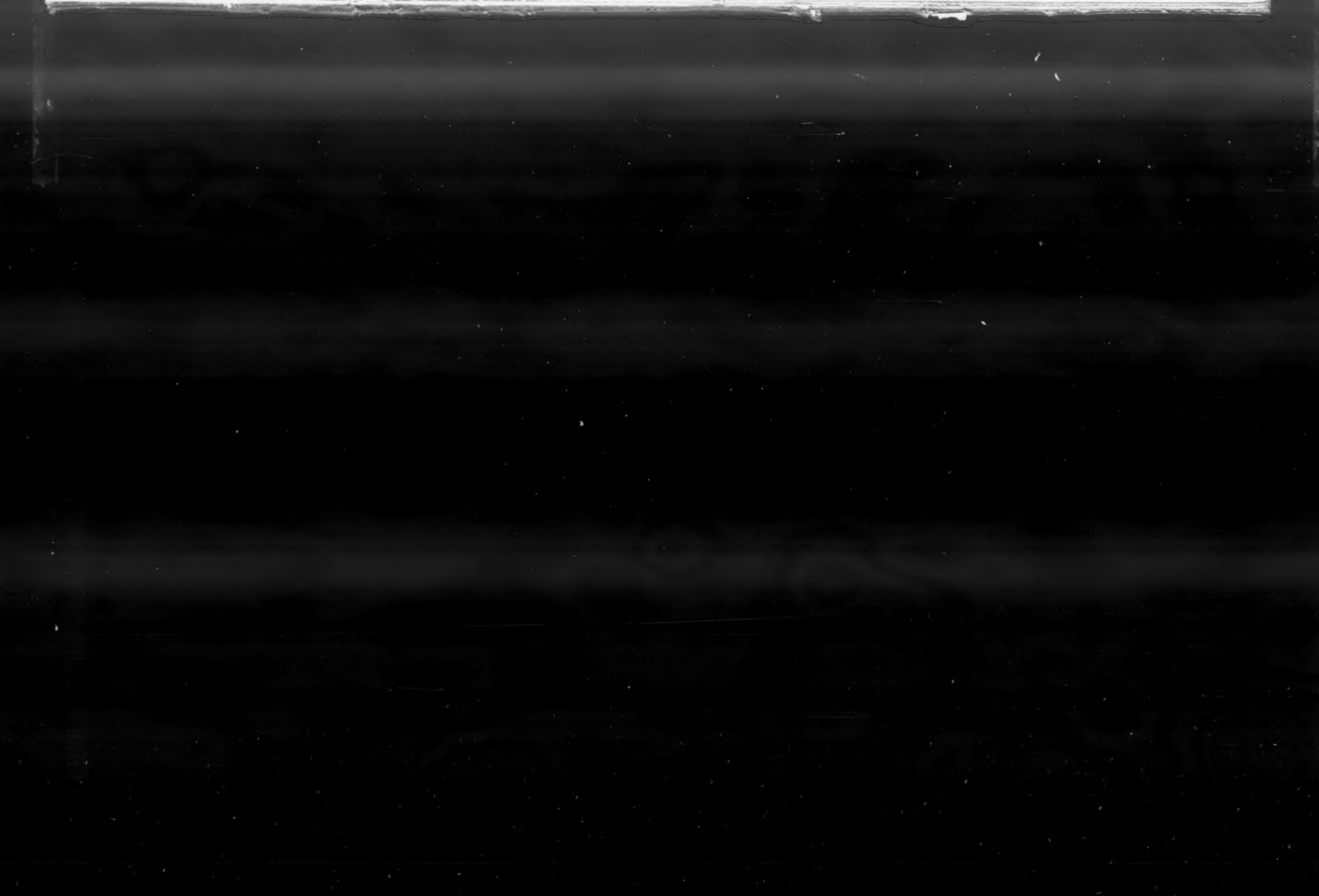
Penny-a-month

LOW-LEVEL FEEDING

nf-180 boosts performance

- Improves egg production
- Saves feed
- Reduces mortality
- Maintains production under stress

and more



Kansas Bluestem Pasture Leasing Gets Slow Start

TOPEKA, KANSAS — Leasing of bluestem pasture in the Flint Hills section of Kansas is lagging behind past years this spring, the Kansas Crop Reporting Service has announced.

Only 67% of the available acreage was under lease by April 1, considerably behind the 75% on April 1 last year and far off from the 82% over the 10-year (1947-56) average.

The lag results from the current high price of stock cattle and favorable pasture conditions in areas from which cattle usually move into the bluestem belt, the report indicated. Increased interest is indicated, however, because the stockwater situation is the most favorable in recent years. Current prospects point to an adequate stockwater supply for the entire grazing season.

Prospects for early grazing are very good, the report said. Soils have been thoroughly soaked, and subsoil moisture reserves are at the best level of recent years.

Wild annual grasses are now showing some growth, but the bluestem is not expected to provide much grazing before May 1. The reported condition of bluestem pastures April 1 was 94% of normal, up 23 points from last year and 9 points over the 10-year average.

Per head lease prices are lower than a year ago for all classes of cattle. Most leases for aged steers range from $18 to $22 per head for the season, with an average of $20. This compares with $20.70 a year ago and the all-time high of $26.90 in 1952. The bulk of leases for cows so far this season have ranged from $22 to $28 and averaged $24.80. Last year's average price was $26 and the all-time high in 1952 was $28.70. Leases for young cattle have ranged mostly from $13 to $18 with an average of $15.80. This compares with $16.40 in 1957 and the 1952 price of $19.70 per head.

Acreage guarantees are lower than last year. The average number of acres guaranteed per head for aged steers is 5.2 acres compared with 5.6 a year ago and the 10-year average of 5.0. For cows, the average guarantee is 6.2 acres compared with 6.9 acres last year and the 10-year average of 5.5 acres.

The average acreage guarantee for young cattle is 3.9 acres compared with 4.3 acres in 1957 and the 10-year average of 3.7 acres. Pastures leased on a per-acre basis averaged $3.80 this year, unchanged from a year ago, and $1 below the all-time high of $4.80 paid in 1952.

Fire Causes $115,000 Damage at G.L.F. Mill

CAMDEN, N.Y.—Fire of unknown origin broke out in the bin section of the Cooperative G.L.F. feed mill and store here recently and caused damages estimated at $115,000.

C. Bruce Alguire, store manager, set inventory loss at $75,000 and equipment loss at $40,000. Destroyed were 460 tons of feed along with plant equipment. A $21,000 shipment of grass, clover and timothy seed had been unloaded at the plant the morning of the fire.

Fire damage was confined to the second floor of the structure. The ground floor suffered considerable water damage.

STEADY PROFIT PULLER

Sell the POPULAR "MILK REPLACER"

Ryde's Cream Calf Meal
FOR GRUEL FEEDING

Ryde's Cream Calf Flakes
FOR FEEDING DRY

This calf starter has successfully REPLACED MILK in calf raising for 46 years

SOLD ONLY BY RELIABLE DEALERS

RYDE & CO. 3939 So. Union St., Chicago 9, Ill.

QUIET VIBRATOR

CUTS OPERATING NOISE

Vibrator noise is sometimes objectionable, especially when vibrators are used in close proximity to personnel for extended periods.

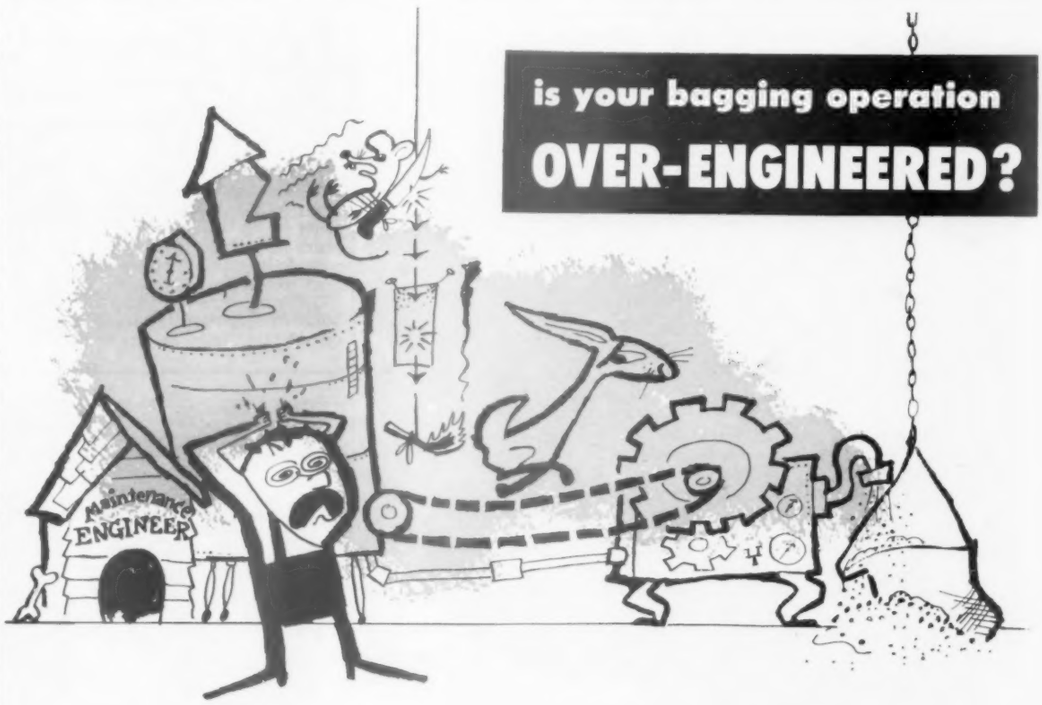
The Cleveland Vibrator Company offers two types of vibrators to solve this problem. They are the RC and the AC vibrators.

The RC's are electric and operate on a rotating eccentric weight principle. They are an enclosed electric motor with rotating, cam-like weights on each end. The RC's make no more noise than a standard motor.

The AC's are similar to standard Cleveland Vibrators, except that the piston stroke is cushioned by a pocket of air. While noise is not eliminated, it is reduced to an unobjectionable level.

For complete catalogs and prices, write to

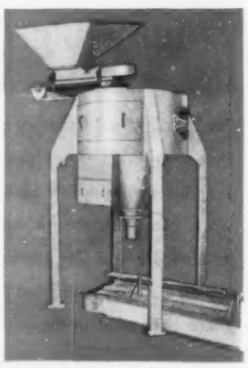
THE CLEVELAND VIBRATOR CO.
Dept. F-48 2828 Clinton Avenue, Cleveland 13, Ohio



is your bagging operation OVER-ENGINEERED?

You need the new SOUTHLAND PACKER!

- **IT'S VERSATILE!** This one compact unit handles the entire range of feed products (except those of high molasses content).
- **IT'S SIMPLE!** Just one scale system, not two or three—fewer moving parts and wear points.
- **QUICK CHANGE-OVER!** A single, simple adjustment changes from 25-lb. to 50-lb. to 100-lb. bags . . . in merely a matter of minutes.
- **HIGH PRODUCTION!** Up to twenty 25-lb. or 50-lb. bags per minute, or twelve or more 100-lb. bags, with accurate weight.
- **DURABLE, RUGGED!** Heavier, more rigid construction—generous use of stainless steel and non-corroding nylon bushings.



The SOUTHLAND costs less, *saves more* . . . less spillage and dusting; minimum headroom and floor space; simple installation and maintenance. Enthusiastic users say it's "tops" in dependability.

All this, complete, less conveyor only $2900 f.o.b. Chattanooga

DISTRIBUTED EXCLUSIVELY BY
CHASE BAG COMPANY
Packaging Specialists for over 100 years

CHASE BAG COMPANY
525 International Trade Mart, New Orleans 12, La.

Please send me free complete information on the new SOUTHLAND PACKER.

Individual _____

Company _____

Street _____

City, Zone, State _____

TALK ABOUT MODERN EQUIPMENT . . . We have it. That's why mistakes are unlikely and our service is so well liked. Send us your copy today. You'll like it too.
Contact Jack McAnulty . . .

THOMPSON PRINTING CO. 3 Russell St., Hammond, Indiana
Telephone: WEstmore 3-0776

MODERNIZED PLANT—This is the Wayland (Iowa) Farm Service, a firm that added new services because of a growing trend toward larger feeding operations. Some 70% of the firm's business is done with turkey growers who buy one to six tons per order and have it delivered in bulk. One of the two bulk trucks is at left.

New Services Instituted to Take Care of Larger Feeders

By Al P. Nelson
Feedstuffs Special Writer

Edwin Leichty, owner of the Wayland (Iowa) Farm Service, made a study of large-scale feeding operations in his trade area a couple of years ago, and it quickly led him to a decision that has made a big impact on his business.

The survey showed him that large-scale feeding operations would grow considerably, and he knew that he would need to make some changes to get a sizable part of the business. Those needs included facilities to process and deliver in bulk as well as to take care of custom mixing.

To meet these needs, he installed new equipment which includes a mixer, 75 h.p. hammermill and a 4,000-gal. molasses tank. With the equipment, he installed automatic controls

Feed Laboratory . . . Necessity or Showplace?

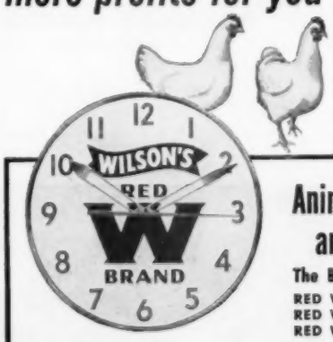
A modern laboratory makes an impressive stop on any plant tour, adds to company prestige, marks you as a progressive firm. More and more, management is recognizing the intangible "showplace" value of a laboratory.

But certainly a laboratory could never be justified on this basis alone. First and foremost, a feed laboratory must be able to pay its own way in savings. How can a laboratory do this? There are several ways. For instance, it has been estimated that accurate, in-plant determination of the protein content of ingredients . . . at the time of mixing . . . can save from $1 to $2 a ton on the cost of finished feeds. There is a point in the growth of a feed mill when a laboratory becomes an economic necessity. Perhaps your mill has reached that point. Maybe you've passed it. Why not investigate today. With only a brief description of your operations, we can supply you a quotation on all of the apparatus, equipment and furniture required for a modern feed laboratory for your mill. No cost, no obligation and it could mean important savings for you. We offer a complete service, from planning through manufacturing, plus assistance in installation when required.

Laboratory Construction Co.
8811 Prospect Kansas City, Mo.

Nature's own formula means better livestock *more profits for you*

Only natural protein and feeding fat have important, unisolated growth factors—nature's own formula—so essential to the development of profitable livestock. That's why Wilson Red W Brand protein concentrates and Vitagen Feeding Fat enable you to produce high energy feeds for livestock and poultry that bring repeat business year after year—business based on meat on the hoof—money in the bank!



Animal Protein Concentrates and Vitagen Feeding Fat

The BEST Ingredients Make BETTER Feeds

RED W BRAND 50% Meat and Bone scraps
RED W BRAND 60% Digester Tankage
RED W BRAND Special Prepared Bone Meal (70% Bone Phosphate of Lime —Minimum)
RED W BRAND Vitagen Feeding Fat

Write or telephone for quotations on any quantity you need!

WILSON & CO., INC. CHICAGO • CEDAR RAPIDS • KANSAS CITY • OKLAHOMA CITY
OMAHA • LOS ANGELES • DENVER • ALBERT LEA • MEMPHIS

AUTOMATIC PILOT—An automatic pilot purchased from U.S. Air Force surplus provides Marion Leichty, mill manager, above, with controls for speeding up or slowing down the hammermill. The hammermill, located in the basement, has an automatic pilot attached, and another is located on the first floor where Mr. Leichty can speed up or slow down the motor with a special arrangement.

to make his operation more efficient and economical.

In his area, many of the farmers raise turkeys. About 70% of the Wayland Farm Service business is done with turkey growers. They buy from one to six tons at a time, and most of them want their bulk feeds delivered.

Wayland Farm Service has two bulk feed delivery trucks, and the deliveries are usually augered right into the feeders on the grower's premises. A small number of growers make their own pickups, and the firm also has a smaller truck for other feed deliveries.

The turkey growing season runs from May until November, and it is followed by caponette feeding. Both operations are under a finance program. In a year's time the Wayland Farm Service furnished and delivered the feed for about 200,000 caponettes. One flock owner had as many as 10,000.

Supervision Required

Mr. Leichty spends much of his time supervising the selling and servicing of feeds to these growers. The mill is under the charge of his brother, Marion. It handles Larro Feeds.

The elevator has 12 storage bins—three for bulk protein, three for corn, three oats bins (one for pelleted oats) plus one bin above the drive-in for oats and another above the drive-in for corn. There are two pits, one for shelling corn and the other for ground corn. A Bryant sheller handles corn shelling.

Grinding and mixing are done with a Daffin "packaged" unit. The hoist, located near the twin mixer, is a product of Bender Hoist & Mfg. Co., and the scale is a 40,000-lb. capacity Fairbanks Morse.

A noticeable feature of the firm's facilities is compactness and ease of operation.

The twin mixer has a capacity of 3,800 lb. for each mixer. As the bulk feed is manufactured, it is augered directly into one of the bulk trucks, or it can be stored in four holding bins, each with a five-ton capacity. The Wayland mill can manufacture its requirements of bulk feed with about 50% of running time and have a half-day left in which to handle custom work.

The hours available for custom work vary due to seasonal bulk feed demands, but thus far Mr. Leichty says he has been able to give quick service to practically all customers.

Automatic "Mill Pilot"

Marion Leichty has an ingenious arrangement for the hammermill in the basement. He installed an automatic pilot (U.S. Air Force surplus equipment) on a post near the mill, and a duplicate pilot upstairs. When he wishes to change the speed of the hammermill motor from a first floor

BUSINESS MANAGEMENT CONSULTANTS

A staff, with years of experience, qualified to provide counsel and analyze the problems of industry and business of all types—large and small—

J. H. Burrell, Pres.

ORGANIZATION
ADMINISTRATION
PRODUCTION
NUTRITION
MARKET STUDIES
SALES & MERCHANDISING
PERSONNEL PLACEMENT
ADVERTISING & PROMOTION
PERSONNEL TRAINING
FORMULATION
COSTS — MARGINS — PROFITS
SPECIAL STUDIES

We can bring to your business unlimited knowledge, accumulated through the years, to help lower costs and build profits.

Call or Write for a Personal Interview

JAMES H. BURRELL & COMPANY, INC.

3615 Olive Street Phone—JEfferson 5-0715 St. Louis 8, Mo.

for extra capacity and faster unloading

BUY THE BULK BODY with the BIGGER BOTTOM

DORSEY Bulkmaster

Self-Unloading
Bulk Feed and Material Bodies
MODEL B-H

DORSEY
Bulky Broadbottom says . .
"Bigger Bottom means lower center of gravity!"
" . . . and you can haul more tonnage here.
" . . . and steeper sides mean cleaner unloading.
" . . . and wider conveyor unloads faster!"

The "bigger bottom" of the Dorsey Bulkmaster is its exclusive 36-inch-wide belt-over-chain conveyor that can't slip and automatically maintains true alignment. Bulkmaster augers are extra-big, too, to handle the increased volume moved by the wide belt: Vertical auger has 12" diameter; horizontal and final discharge augers—9".

Bulkmaster's speedy unloading means more profits for you!

Model B-H features also apply to Trailer Transport Model BT-H. Air-Unloading Bulkmasters also in "bigger bottom" design.

DORSEY TRAILERS

ELBA, ALABAMA

More Bulkmaster Quality Features

Completely Hydraulic Unloading System with four motors so speed of belt and augers can be regulated.

19' Unloading Height with 14' final discharge auger.

Safer Unloading—conveyor or augers automatically stop if foreign matter obstructs the system.

By-Pass Doors for easy unloading directly into pits.

. . . many more features make Bulkmaster your best buy! For the FULL STORY, see your Dorsey Distributor or

Mail Coupon for Literature

Dorsey Trailers
Elba, Alabama

Please send literature on the Dorsey Bulkmaster line of (check one or both):

Bulk Bodies_____ Bulk Transports_____

Name_____

Address_____

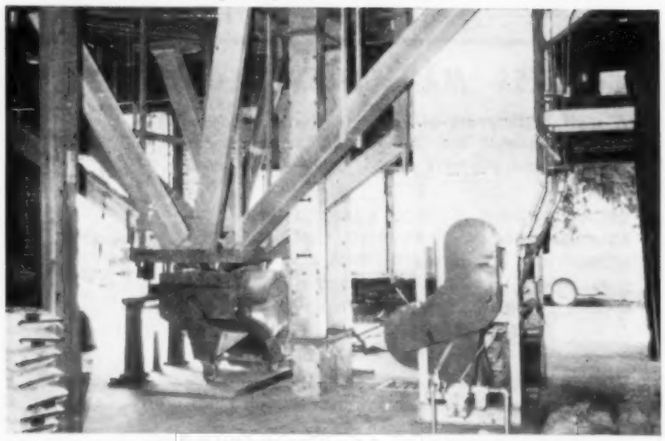
City_____ State_____

SW

FOR THE BEST IN

SIFTERS

SPROUT-WALDRON
MUNCY, PENNA.



COMPACT LAYOUT—Although enclosed in a rather small building, the Wayland (Iowa) Farm Service has a compact layout that allows space for necessary equipment. Facilities here include a twin mixer unit and weigh buggy and spouts. A hammermill and molasses tank are located in the basement.

location, he uses the upstairs pilot for this operation. It will slide the motor on the mill upward to increase speed, if needed, or bring it back to slow speed. He uses a variable-speed pulley with a spring on it to accomplish this purpose.

Without this arrangement, he would be forced to go into the basement and use a hand crank to accomplish the same purpose. Marion believes that such a setup could also be used in other places in the mill, too.

For custom grinding and mixing, Wayland Farm Service charges 6% interest on accounts over 30 days. A sign to this effect, posted on the office wall, induces many customers to pay up. The psychological effect of the sign is excellent, reports the bookkeeper, as it is a constant reminder to customers to keep their credit rating good.

This firm also uses the grain bank plan, or "grinding account," as some dealers call it. Farmers can store their grain at the Wayland Farm Service elevator and then draw on this grain, especially corn, as they have grinding needs. The use of this plan, within the limited storage capacity of this small mill, has assured the management of a continuance of the feed business of many customers. Storage capacity of corn under this grain bank plan is 12,000 bu.

The various services of the Wayland Farm Service are stressed to farmers through advertising and also at the several feeder education meetings held during the year. Farmers learn how they can get feed in bulk and take advantage of the grain bank plan which lessens storage bin requirements on their farms.

At such meetings, too, Larro representatives help Mr. Leichty inform farmers about balanced feeding programs for livestock and poultry. The question and answer period which follows talks and movies is always informative and helpful to farmers.

Thus, with a small but modernized mill, Mr. Leichty is meeting the requirements of customers in his area, serving both large and small volume buyers.

Number of Layers Decreases by 3%

WASHINGTON — Laying hens on farms were down 3% in number and 2% in rate of lay April 1, when compared with the same date a year earlier, the U.S. Department of Agriculture reports.

The number of layers April 1 totaled 300,106,000, compared with 308,510,000 a year earlier. The rate of lay was 60.8 eggs per 100 layers, compared with 61.9 eggs April 1, 1957, and 59.5 for the 10-year average.

Both numbers of layers and rate of lay were down in all regions of the U.S. except the West. In north central states, layers and rate of lay were both down by 4%. The east north central showed a drop of 3% in layers and 1% in rate of lay. In the west north central there were drops of 4% and 1%, respectively. The decreases in the south Atlantic were 1% and 3%, and in the south central the decreases were 5% and 2%.

The West, meanwhile, had an increase of 3% in number of layers and no change in the rate of lay.

Prices received by farmers for eggs averaged 40.8¢ doz. in mid-March, compared with 36.6¢ a month earlier and 30.6¢ in mid-March, 1957.

biggest profit maker by far

when you feature and display

Blatchford's
ESTABLISHED IN 1800

CALF-PAB

"GOOD TO THE LAST DROP" ESTABLISHED IN 1800

✔Faster Selling!

Lower cost plus the Blatchford reputation for quality give you rapid inventory turn-over.

✔Quicker Profits!

And more profits, too! Calf-Pab sells on sight because Calf-Pab's famous name is known everywhere.

✔Ready Acceptance!

Even with Calf-Pab's pre-sold customer acceptance you get full mark-up . . . assurance of profitable selling.

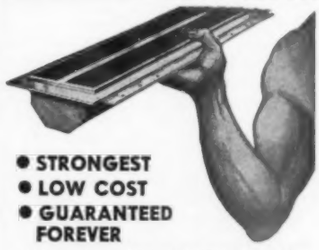
Ask your distributor for Calf-Pab today!

NOW! CALF-PAB
FORTIFIED WITH NEW CHEMOBIOTIC
DYNAFAC
FOR 10% TO 15% GREATER WEIGHT GAINS AND A NEW SELLING ADVANTAGE FOR YOU!

Blatchford's
ESTABLISHED IN 1800
Main Plant and Offices: WAUKEGAN, ILL.
Midwest Division: Des Moines, Iowa
West Coast Division: Nampa, Idaho

Write for FREE
Calf-Feed Sales Display Kit
DEPT. 248

W-W PERMANENT MAGNETIC SEPARATOR



- STRONGEST
- LOW COST
- GUARANTEED FOREVER

30% more pull than with any comparable magnets. Equipped with Alnico V units . . . protective casing. Available hinged or plain . . . 48-hour shipment.

W-W HAMMERMILLS

HAVE A HEART OF STEEL

W-W hammers, the original hard-surfaced hammers, have Tungsten Carbide cutting edges which last for entire life of the hammers — many times longer than any other hammer.

W-W GRINDER CORP.
Dept. 311 Wichita 4, Kansas

Geoffrey B. Sweatman

DIRECTORSHIPS—John Lea, chairman of the board of Minsal, Ltd., British mineral mixtures concern, has announced the appointment of four new directors. They are Geoffrey B. Sweatman, Ernest R. Baynham, James Cassidy and Alan L. Farrand. Mr. Sweatman is well known in the British grain trade and has served as chairman of the metropolitan branch of the National Association of Corn and Agricultural Merchants.

Economist Expects Profitable Prices for Hogs Sold This Fall

EAST LANSING, MICH.—Fall hog prices will stay high enough to make the farmer a profit providing consumer buying doesn't drop more than is currently predicted, according to John Ferris, farm economist at Michigan State University.

Mr. Ferris looks for prices to be down a little from last fall's level because of a somewhat larger pig crop. But he believes the drop will be only slight because the increase in the pig crop is only modest considering the high corn-hog ratio.

(Another prediction of favorable hog prices was made by L. H. Simerl of the University of Illinois in a story in the April 5 issue of Feedstuffs.)

Total December-to-May pig crop is expected to be around 6% larger than a year ago, Mr. Ferris noted. Most of this increase was farrowed in the December-to-February period. In the more important March-to-May period only 1% more sows are expected to farrow.

The shift to earlier farrowings should help even out the great variation in rate of slaughter from summer to fall.

Ten years ago about 22% of the pigs farrowed in the December-to-May period came in the first three months of that period. Last year, however, 29% were farrowed between December and February and 32% arrived in the winter months this year.

The farm economist expects the peak in slaughter this fall a little earlier than usual. The peak has been in December. But in 1956, it was in November and last year it was in October.

About 13% more sows and gilts are expected to farrow this summer. There's no immediate threat to the slaughter market price level. But Mr. Ferris warns that if this increase continues into the fall and spring farrowing season, over-production problems can probably be expected in 1959.

If farmers would restrain themselves as they did this year, the economist concludes, hogs could make money for them next year, especially if corn prices hold to levels of this last year.

FIRE DAMAGES FIRM

WHITING, IOWA—Fire of undetermined origin recently damaged the Langren Feed Corn Co. installation here. Damaged were the corn dryer, part of the warehouse, most of the storage space, four tractors and the office.

KAFIR & MILO
Largest Dealers in Southwest
MID-CONTINENT GRAIN CO.
Board of Trade VIctor 2-4671
KANSAS CITY, MO.

DEHYDRATED ALFALFA MEAL
Animal Fat Treated
Bulk Bagged Meal Pellets
ALFALFA—MOLASSES
Sunecured Alfalfa—20% Cane Molasses
ALFA—CANE
Dehydrated Alfalfa - Animal Fat - Cane Molasses
ROHLOFF BROS., INC.
RFD GRAYTOWN, OHIO

CORN SHELLER OPERATORS IS THIS WORTH ITS WEIGHT IN GOLD..?

No, but this common stone may cost you its weight in gold if it enters your sheller.

The Anderson STONE SLEUTH is a proven remedy to this headache.

Here is a modern instrument guaranteed to detect stones and other foreign objects present among ear corn before they can cause breakdowns and costly delays in your shelling operation. Let us tell you how the STONE SLEUTH can save you money.

FOR INFORMATION, WRITE: The Andersons MAUMEE, OHIO

You Sell The Best When You Sell GRAN-I-GRIT

THE GRIT WITH THE SHARPEST GRINDING EDGES EVER CUT

You are insuring your Future Profits when you sell GRAN-I-GRIT . . . the BEST Poultry Grit . . . because GRAN-I-GRIT will repeat in ever increasing volume for you.

That's WHY Dealers and Jobbers have become so enthusiastic about selling GRAN-I-GRIT.

GRAN-I-GRIT Research
FIRST Pioneered and Proved
That the Feeding of Larger Sizes of Grit Would Increase Profits

Because of GRAN-I-GRIT'S extensive Research Department, poultry raisers are now able to make INCREASED PROFITS THROUGH THE FEEDING OF LARGER SIZES OF GRAN-I-GRIT.

Larger sizes of GRAN-I-GRIT not only grind feed more efficiently but also keep the digestive tract open for full feed utilization by grinding feathers and fibrous litter that all poultry eat.

Small grit passing through the digestive tract, rather than staying in and working in the gizzard, takes space needed for feed.

Full Details on GRAN-I-GRIT'S New Feeding Program

There is a new GRAN-I-GRIT circular that explains in detail this new GRAN-I-GRIT feeding method that makes more money for broiler growers and egg producers. You, as a poultry grit dealer or jobber, should write for FREE copy today.

Nationally Advertised

Member of Granite Grit Institute of America

Sharper Grinding Edges Release More Nutrients From Your Feed

Those EXTRA valuable body building nutrients that GRAN-I-GRIT gives you by finer grinding of your feed are a great aid in speeding growth, body development and weight gains of broilers, and in getting more eggs for each pound of feed consumed. GRAN-I-GRIT will not dissolve and does not change the mineral balance of your feed.

GRAN-I-GRIT is packed in 10 lb. and King Size (App. 22 lbs.) Feeder Packs and 25, 50 and 80 lb. bags.

It's a Fact . . .
GRAN-I-GRIT
Has *Eye Appeal*
for Poultry of All Ages

Poultry must consume the proper amount of grit to get maximum results from feed and GRIT MUST HAVE EYE APPEAL before poultry will eat it.

Side by side tests have proven that chickens and turkeys of all ages prefer a light gray grit with black specks . . . THE GRAN-I-GRIT TYPE . . . as much as 10, 15 and even 100 to one over grit of other colors.

When poultry raisers know this fact they insist on GRAN-I-GRIT.

NORTH CAROLINA GRANITE CORPORATION
MOUNT AIRY NORTH CAROLINA

Bulkanizer
Truck Body
puts you in the Bulk Feed Business for about $1500*

. . . less cost than any other similar unit

Easy one-man operation A complete, self-unloading truck body for only slightly more than a hydraulic dump box. To unload, simply swing auger into position and start. Standard length auger discharges up to 22 feet high. Raises hydraulically and swivels a full 360°. Steep V body design eliminates sweeping or scooping. All operating controls together.

Unloads up to 1,200 lbs. per min. You spend less time per delivery. Make more deliveries per day. Two models; capacities of 8,800 lb. and 11,760 lb.

Low maintenance costs No chains or sprockets to wear out or bother with. Steel-cut, case-hardened gears run in oil. The three gear box elbows are interchangeable for easy service. Automotive seals keep grease in, dust and feed out. Bulkanizer farm trailer available for feeders in 1½, 2 and 3 ton models.

*Mounted on your truck frame. Prices vary slightly according to location.

NORTH AMERICAN Dodgen

Quality performance and low cost make the Bulkanizer your most profitable way to get into the big bulk feed business. Mail this coupon today for more information.

Sioux City, Iowa Dept. FS-4

Please send me further information on the Bulkanizer truck bodies. I understand there's no obligation.

NAME .....

ADDRESS .....

CITY ..... STATE .....

PANEL SPEAKERS—A panel discussion on contract hog production was presented at the recent Illinois Swine Growers Day at the University of Illinois. Members of the panel were (left to right): Earl Crouse, Doane Agricultural Service, Inc., St. Louis; Ben M. A. Smith, Hunter Packing Co., East St. Louis, Ill.; George Brauer, hog producer from Oakford, Ill., and Dr. J. L. Krider, McMillen Feed Mills, Fort Wayne, Ind.

Illinois Scientists Report on Swine Feeding Research

URBANA, ILL.—The recent Illinois Swine Growers Day at the University of Illinois included a number of reports on swine feeding research. One of the reports showed that improved drylot rations have taken much of the advantage out of pasturing growing pigs.

(An earlier story from the event, on a discussion of integration in the swine industry, appeared in the April 12 issue of Feedstuffs.)

Dr. S. W. Terrill, department of animal science, said that gains in these swine tests were about the same for both pasture and drylot feeding of growing-finishing pigs.

Pigs on pasture ate 7% less feed than pigs in drylot but needed about the same amount of feed per pound of gain. At a stocking rate of 40 pigs an acre on good alfalfa-ladino pasture, feed-saving value of the pasture in these tests ran about $12 an acre. This raises the question whether using this land for hog pasture is profitable if such high-profit crops as corn or soybeans could be raised instead, Dr. Terrill commented.

Another advantage of drylot feeding for growing-finishing pigs is the chance it offers for a more comfortable environment, especially during unusually hot or cold weather, than pigs have on pasture.

"Results of these experiments," Dr. Terrill said, "show that swine growers should feed complete rations throughout the growing-finishing period on either pasture or drylot for best gains, highest feed efficiency and uniformity of performance."

Another paper, given by Dr. D. E.

A PHONE CALL TO

ESTABLISHED 1873 Woodward & Dickerson Inc.

BRINGS YOU IN TOUCH WITH

WORLDWIDE RESOURCES FOR FEED INGREDIENTS

FISH MEAL • ANIMAL FEED SUGAR
BEET PULP • BONEMEAL • VEGETABLE PROTEINS
BRAN & POLLARDS • ANIMAL PROTEINS
BREWERS GRAINS
DICALCIUM PHOSPHATE

ESTABLISHED 1873
Woodward & Dickerson Inc.

WD-601

1400 SOUTH PENN SQUARE, PHILADELPHIA 2, PA., U.S.A.
TELETYPE PH109 PHONE LOcust 4-5600

HAVANA, BARCELONA, MANILA, TOKYO, SEOUL, WASHINGTON, D.C.

Becker, department of animal husbandry, reported university tests in which pigs gained faster on complete rations than pigs fed free choice, both in drylot and on pasture.

"Pigs fed complete rations on pasture gained considerably faster than pigs fed free choice on pasture," Dr. Becker said. "Pigs fed free choice on pasture made the most economical gains, but they gained only 1.11 lb. a day, on the average, compared with 1.40 lb. a day for the pasture pigs getting a complete ration.

"Apparently the big difference between the pigs fed free choice and those fed a complete ration on pasture was in feed intake," the swine researcher said, "since there was little difference in feed efficiency. Pigs eating free-choice rations on pasture ate more forage. They needed less grain and supplement for each pound of gain, but they also gained less than pasture pigs getting a complete ration."

Reporting on an evaluation of oats in pig rations, Dr. A. H. Jensen, department of animal husbandry, said that replacing corn with oats did not improve the nutritive value of rations for growing-finishing swine. Other points indicated by the research were that (1) the source of oats and level used in the ration determined the degree of growth inhibition; (2) a pound of gain on less feed was produced by 32-lb. test-weight oats than 24-lb. test-weight oats; (3) the growth-inhibiting effect of oat hulls in a corn-soybean oil ration was reduced by adding corn oil as a source of energy; (4) rations containing a high proportion of oats were bulky, necessitating frequent feeder adjustments; (5) because oats vary widely in feeding value, it would not be satisfactory to recommend specific quantities for use in rations for growing-finishing swine; (6) when oats replace corn pound for pound in a corn-soybean oil meal type of ration, growth rate and feed efficiency are generally reduced. Rate of substitution and test weight of the oats will determine their relative feeding value.

A report on complete rations for swine indicated that 16% protein ration in drylot and a 14% protein ration on pasture can be fed to (1) growing-finishing pigs from weaning (30 lb.) up to 100 lb.; (2) gilts hand-fed during the gestation period; (3) mature sows hand-fed during the last half of the gestation period; (4) gilts and sows during the lactation period, and (5) breeding boars.

The test results also indicated that a 12% protein ration in drylot and the 10% protein ration on pasture can be fed to (1) growing-finishing pigs from 100-200 lb. and (2) mature sows hand-fed during the first half of the gestation period.

ELEVATOR DESTROYED

RED ROCK, OKLA.—The original elevator of the Red Rock Farmers Cooperative and 12,000 bu. of grain were destroyed by fire recently. The blaze apparently started in the head house.

Jess Carter, Milling Expert, Dies at 64

BALTIMORE — Jess Carter, manager of the machinery division of E. H. Beer & Co., Inc., Baltimore, died recently in a Baltimore hospital after an illness of several weeks. He was 64.

Mr. Carter had a long career in the grain business. He started with Quaker Oats Co., where he served as a milling superintendent in Canadian and U.S. plants until 1939, when he joined Hinkle Milling Co., Detroit, as general milling superintendent.

In 1943 he joined E. H. Beer & Co. as general supervisor of all operations and continued in this capacity until 1952, when he went into business in California as a milling consultant.

He joined the Krause Milling Co., Milwaukee, in 1953, and in 1954 became a warehouse examiner for the Commodity Credit Corp. in Washington. In 1957 he returned to E. H. Beer & Co. to take the post he held until his death.

...all you need...

All the help you need for a complete feed manufacturing and selling program . . . that's what the Ultra-Life Program provides you! Tested and proven vitamin and trace mineral fortification products that fully reflect latest nutritional developments; specialized formula service; laboratory and biological testing facilities; tag registrations and printing; advertising aids; your own firm name 16 page poultry and livestock journal, and many other sales and merchandising helps.

Write today for full details . . . see for yourself how the Ultra-Life Program works for you to help you maintain a strong competitive position.

Ultra-Life Laboratories, Inc.

Main Office and Plant East St. Louis, Illinois

One of the Country's Oldest and Largest Manufacturers of Vitamin and Trace-Mineral Products

CUT Phosphate COSTS

APPROXIMATE COMPARATIVE COST PER UNIT OF EFFECTIVE PHOSPHORUS
(Delivered Midwest)

Soft Phosphate	$2.75
Bone Meal	6.85
Dicalcium Phosphate	4.75
Defluorinated Phosphate	4.70
Low Fluorine Rock Phosphate	4.35

Soft Phosphate

WRITE for brochure, research data, sample & price

Soft Phosphate Inc., Box 31, Media, Pa.

Dowzene DHC makes your feed a one-day wormer

There's only *one way* to give your feeds the added selling advantage of *one-day worm control*. And that's to include Dowzene* DHC in your formulas for hogs and poultry.

Farmers don't have to feed medicated feed week after week to rid their swine and poultry of worms. It's "here today and gone tomorrow" for large roundworms and nodular worms when they use feed containing Dowzene DHC. In a single day, Dowzene DHC controls worms . . . and *eliminates* them from the system. The worms are *gone*. Egg production is *stopped*.

Dowzene DHC does the job quickly and safely. Dowzene DHC is palatable and completely compatible with all other feed ingredients. In fact—with all its amazing speed—Dowzene DHC is actually safer, even for small pigs, than ordinary table salt.

Give your customers the advantage of this modern way to worm. You'll find it's to your advantage, saleswise. Get complete information on Dowzene DHC by writing to: THE DOW CHEMICAL COMPANY, Agricultural Chemical Sales Dept., Midland, Michigan.

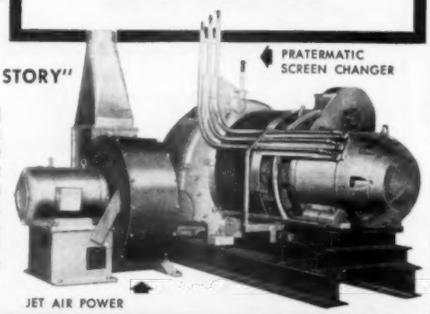
*TRADEMARK OF THE DOW CHEMICAL COMPANY

YOU CAN DEPEND ON DOW

There's More Profit with BLUE STREAK Prater

Send For Your Copy of "THE PRATER PROFIT STORY"

Read about the actual field surveys among Custom Feed Mills which prove that "There's More Profit with PRATER". Learn about PRATER'S Custom engineering that helps you boost earnings and cut costs. Write for "The Prater Profit Story" today.



PRATER PULVERIZER COMPANY
1537 S. 55th Court • Chicago 50, Ill.

J. Townsend Rose

Ray H. Tomberlin

ALBERS CHANGES—J. Townsend Rose has been promoted to the position of supervisor of Lab-Mix sales for the eastern specialty division of Albers Milling Co., with headquarters in Kansas City, and Ray H. Tomberlin has been appointed sales manager for the Kansas City division of Albers Milling Co. Mr. Rose has been with the firm since 1952. In 1954 he was made manager of a company-owned store in California and in 1956 was promoted to sales supervisor for northern Missouri, Kansas and Colorado. He has a bachelor's degree in animal husbandry and a master's degree in animal science. Mr. Tomberlin has had experience in a managerial position with a large, national feed manufacturer. He has a bachelor's degree in business administration.

Statewide Chick-N-Que Set May 1 in Georgia

DECATUR, GA.—What is believed to be the largest organized Chick-N-Que ever held in the nation is planned for the state of Georgia May 1.

Some 100,000 plates holding half a chicken and one egg are expected to be served at 200 locations by 25,000 Future Farmers of America and Future Homemakers of America members. The FFA and FHA chapters over the state have planned the event to illustrate how chicken can be "cooked outdoors."

Assisting the two youth groups are the Georgia Poultry Federation, Georgia Egg Assn., University of Georgia poultry department, Poultry & Egg National Board, National Broiler Council and the Southeastern Poultry & Egg Assn.

To make sure that tourists passing through Georgia May 1 will not miss the event, many chapters have planned to set up pits on court house squares in their communities. Others are planned at schools and downtown parking lots.

★ Buy and Sell Through WANT ADS ★

egg shell quality begins with EGGSHELL BRAND OYSTER SHELL

When a poultryman buys a calcium supplement, he's looking for a product that will build top-quality egg shells and one that his birds will eat readily. Why not sell him the oyster shell which does the job best: EGGSHELL BRAND Oyster Shell?

Here's why:

SOFT AND DIGESTIBLE—No other calcium product for poultry tops EGGSHELL BRAND for digestibility.

ECONOMICAL TO FEED—Triple-screening and triple-washing provide a dust-free product.

HEAT STERILIZED—Great care in heat sterilization makes pure, soft reef shell highly palatable to birds.

TRACE MINERALS—This great egg shell and bone builder has a guaranteed analysis of 97% Calcium Carbonate, plus highly-important trace minerals.

EGGSHELL BRAND OYSTER SHELL
a product of
OYSTER SHELL CORPORATION
BALTIMORE, MARYLAND

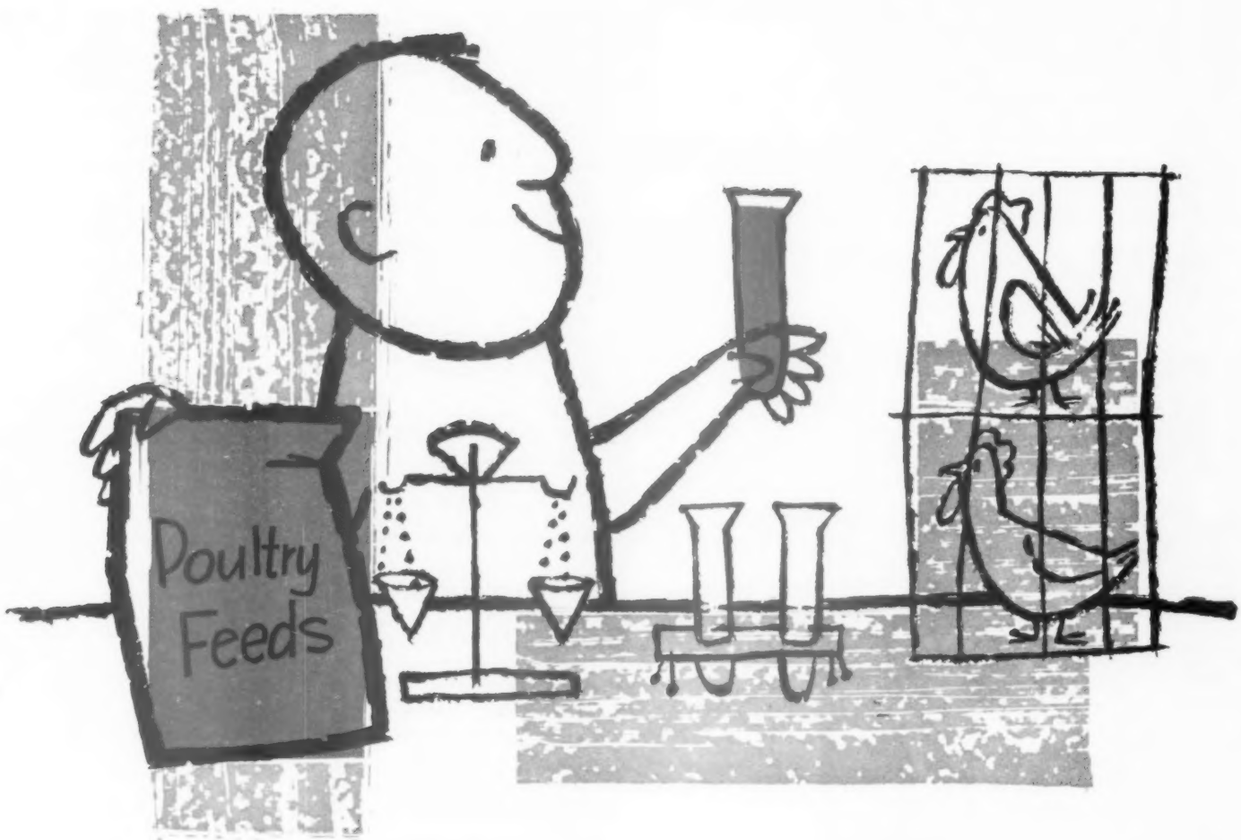
Send for your FREE COPY

HARSHAW

Contents

	Page
Facts About The Harshaw Chemical Company	2
Aerial View—General Offices & Research Laboratories	4
Essential Trace Elements in Plant & Animal Nutrition	5
Trace Mineral Compounds	9
Fungicides	12
Weed Killers	14
Miscellaneous Agricultural Compounds	15
Available Literature	16
Supplementary Reading	16
Location of Sales Offices and Warehouses	17

THE HARSHAW CHEMICAL CO.
Chicago • Cincinnati • Cleveland • Detroit • Hastings-On-Hudson
Houston • Los Angeles • Philadelphia • Pittsburgh



PROVEN NUTRITIONAL AVAILABILITY

That is the first requirement of all trace minerals in Morton Trace-Mineralized Mixing Salt... especially the Manganese and Iodine used in poultry feeds!

In Morton Trace-Mineralized Mixing Salt, the source of Manganese is Manganoferro Phosphate. The source of Iodine is Cuprous Iodide*. These trace elements, Manganese and Iodine, have been proven by the Armour Research Foundation to be in compounds that are most readily utilized by poultry. The Manganese, of course, is necessary to control the costly perosis or "slipped tendon" in poultry and the Iodine regulates thyroid activity.

When you use Morton Trace-Mineralized Mixing Salt you have the safeguard of that "extra-high" nutritional availability of trace minerals when it's needed —at no extra cost.

In addition to Trace-Mineralized Mixing Salt, Morton also makes Iodized Mixing Salt and extra-free-flowing Special Mixing Salt. Morton's nation-wide distribution enables you to get these products quickly anywhere in the United States.

**Cuprous Iodide is patented for use by the Morton Salt Company (pat. No. 2,772,167)*

Mail coupon for information on Morton Mixing Salts.

Morton Salt Company, Dept. F-419-2
120 So. LaSalle St., Chicago 3, Illinois

Name_____

Company_____

Address_____

City_____

County_____ State_____

MORTON MIXING SALTS

IODIZED MIXING TRACE-MINERALIZED MIXING SPECIAL MIXING

TRADE MARK REG.
VITA-GEE
A LIVE YEAST CULTURE — for 4-footed animals and poultry. Supplies all known B Complex Vitamins including B_{12} plus other nutritional factors. Easy to add to any formula.
Write or Wire for sample and prices.
ZELLERS' LABORATORIES READING, PA.

CHECKERBOARD GRAIN COMPANY
Buyers and Sellers of
MILLFEEDS, GRAINS AND GRAIN PRODUCTS
CHICAGO KANSAS CITY ST. LOUIS MINNEAPOLIS

Allied Chemical Revamps Nitrogen Division Department

NEW YORK — Nitrogen Division, Allied Chemical & Dye Corp., has announced a reorganization of its development department, located at Hopewell, Va.

The reorganization, which became effective April 1, "gives the department a structure in which work on existing research projects can be expedited and new areas of research fully explored," according to F. O. Agel, vice president, who is in charge of development activities for the division.

Under the new organization, Dr. E. D. Crittenden, formerly director of research, becomes a consultant to Mr. Agel. Dr. Crittenden, one of the pioneers of the nitrogen industry in America, will be concerned with the general implications of the research program and new directions being explored by the division. Dr. Crittenden has been with the division since 1926.

Three men have been appointed to the newly created positions of associate director for review and evaluation of the department's program. They are Dr. L. J. Beckham, formerly chief of ammonia research, Dr. C. K. Lawrence, formerly chief of organic research, and E. W. Bowen, formerly executive assistant to the vice president.

The reorganization also involves a realignment of responsibilities under which L. E. Dewling, formerly chief engineer, has been appointed director of process engineering; R. M. Jones, director of product development; Dr. H. L. Heckel, director of laboratories; Dr. G. J. Coli, director of operations engineering, and Carl Sampson, manager of construction.

The development department is responsible for Nitrogen Division's research, engineering and construction program. The division has plants in Hopewell, Va.; South Point, Ohio; Omaha, Neb., and Orange, Texas. Its products are used in the manufacture of fertilizers and industrial products.

U.S.I. Sponsors Study Of Cellulose Digestion

NEW YORK — A fellowship has been provided at Rutgers University to study the role of ethanol in cellulose digestion of dairy cows, U.S. Industrial Chemicals Co., division of National Distillers & Chemical Corp., has announced.

The U.S.I. fellowship will help Rutgers graduate students conduct experiments concerning the effect of a liquid feed supplement containing ethanol and urea nitrogen on the rate of fermentation in the rumen of cows. Dr. James L. Cason, Rutgers department of dairy science, will supervise the experiments.

Dr. Harry J. Prebluda, manager, U.S.I. special products sales, said the studies at Rutgers will be another step in development of Morea liquid livestock feed supplement. He said that ethanol, urea and phosphoric acid are vital ingredients in the supplement, which also contains molasses and essential trace minerals.

"Ethanol acts as a hydrogen donor to speed up rumen fermentation, improve cellulose digestion and enable dairy cattle, beef cattle and sheep to consume additional roughage," Dr. Prebluda stated.

Both Feed Service Corp., Crete, Neb., and U.S.I. are now marketing Morea liquid feed supplement through authorized mixer-distributors, he said.

CHARTER GRANTED

TOPEKA, KANSAS — Western Grain, Inc., Cimarron, has been granted a charter. Merle B. Brown has been named resident agent. Capitalization of $100,000 was authorized.

Mix high-profit feeds IN ONE OPERATION WITH
Gorton's BLENDS

Replace many ingredients with one COMPLETE Blend!

Each of these New Englander products can completely fortify the feeds you mix. Ocean-Fresh fishery products and other farm-proven ingredients give these Blends every essential vitamin, the highest quality protein, and a full measure of unknown growth factors—everything your feeds need to boost egg production and hatchability, to produce maximum feed efficiency in broilers and turkeys. The uniformity and potency of these complete Blends are guaranteed. You save money, to say nothing of mixing time and inventory space. So what are you waiting for? Drop a card to our distributor nearest you or write us direct for full details.

Also ask about
Fish Meals • Condensed Fish Solubles • Dried Potato Pulp • Vitamin Oils • Richpelt ocean-fresh Frozen Fish • Whole Meat • B.H.T. • Southern Sunshine Poultry Litter.

AL-FISH BLEND
LAYER BLEND
MAR-VI-TIC BLEND
TURKEY BLEND

NEW ENGLANDER PRODUCTS
are distributed by

O. A. Newton & Son Co.
Bridgeville, Delaware
Phone 2551

G. Dan Enterline, Jr.
Dover, Delaware
Phone 2115

H. Mark McNeal Co.
1207 Liberty Life Bldg.
Charlotte 2, N. C.
Phone: Franklin 7-1522

L. E. "Robbie" Robertson
P.O. Box 691
Binghamton, N.Y.
Phone: Binghamton 2-7152

Smith Grain Co.
Limestone, Tennessee
Phone 2660

Parnell Grain Co.
Parkton, N.C.
Phone: Ulysses 8-3354

Holly Farms Poultry Co.
Wilkesboro, N.C.
Phone 1600

Henry E. Kraus
2526 Longview Ave., S.W.
Roanoke, Virginia
Phone: Diamond 2-4802

Herbert Clift
472 South Mason St.
Harrisonburg, Va.
Phone: Harrisonburg 4-4848

Cooperative Feed Dealers, Inc.
P.O. Box 431
Binghamton, N.Y.
Phone: Binghamton 3-3521

J. Kenneth Blackstone
RD #1
Caribou, Maine
Phone: Caribou 2-0032

C. C. Welch
435 Brevoort Road
Columbus, Ohio
Phone: Amherst 8-1077

L. J. Barrett Co.
Box 505
Clinton, N.J.
Phone: Clinton 451

PUT LIFE IN YOUR LIVESTOCK FEED with
New Englander VITALIZER
Vitalizer helps guard dairy cows, calves, beef cattle, and sheep against variations in roughage. Colorful advertising in leading farm publications is telling your customers about Vitalizer's unique advantages. Write today for full details.

NEW ENGLAND BY-PRODUCTS CORP.
177 Milk Street • Boston 9, Mass. • Hubbard 2-1682

COLUMBIA SOFT PHOSPHATE
IMMEDIATE DELIVERY
LOW COST
WRITE FOR INFORMATION
Columbia Phosphate Co.
1807 Washington St. Louis, Mo.
COLUMBIA PHOSPHATE CO.
PHOSPHATE PRODUCTS

Triumph
CORN SHELLERS
CLEANERS and COB BLOWERS
for GRAIN ELEVATORS and FEED MILLS
WRITE FOR FULLY DESCRIPTIVE CATALOG
THE C. O. BARTLETT & SNOW CO.
6249 HARVARD AVE. • CLEVELAND 5, OHIO

Lilly **REPORT TO THE FEED INDUSTRY**

Two supplement markets to cash in on...now

by Eugene S. Hahnel

Many feeders are on the verge of becoming full-fledged supplement users. 'Stilbosol' is a powerful partner to help bring you immediate new cattle supplement business.

There are increasing signs that a large number of cattle and sheep feeders who have been only on-and-off-again supplement users are ready to be converted all the way. What will it take to get the job done?

(1) Keep the in-and-outers in. A little persistent repetition of facts to fence-sitters should convince them that supplements with 'Stilbosol' must be *fed every day for top-profit results*. Part-time feeding brings only partial benefits. The simple arithmetic of 15 to 30% extra daily gains and 12 to 15% feed savings is potent selling . . . especially since it represents a return of $10 to $20 for every $1 spent to include 'Stilbosol' in the ration.

(2) Safe, sound, and profitable for heifers. Supplements with 'Stilbosol' are the *only* safe and accepted way to give market heifers the gain-boosting benefits of diethylstilbestrol. On grain rations with 'Stilbosol,' heifers put on between 9 and 15% extra daily gains, at 6 to 10% feed savings per pound of gain.

The majority of feeders who are confirmed users of 'Stilbosol'-fortified supplements are record keepers. They like what they see . . . and are then completely convinced by their own records.

Customers or prospects who can be convinced to put gain and cost figures down on paper will automatically provide the best sales tool you can have to prove to them that they cannot afford to feed without using your 'Stilbosol'-fortified supplements.

These observations are documented by hundreds of examples over the past three years that 'Stilbosol'-fortified supplements have been available. Below are four typical examples.

Leslie Larson, Erwin, S. D., fed 53 heifers for 225 days. Made 2.75 lbs. daily gain at cost of 15¢ per lb. of gain. "My experience with 'Stilbosol,' whether on steers or heifers, has shown extra, cheaper gains." (Farmer-feeder)

Claude & Bill Van Hoozer, St. Joseph, Missouri. After feeding over 8000 head supplements with 'Stilbosol' they say, "We wouldn't operate without 'Stilbosol' in feed. Gain up to ½ lb. extra per day." (Commercial feeders)

Larson & Son, Helena, Montana. "Feeds with 'Stilbosol' are a great thing for the cattle-feeding business. We have found no difference in dressing percentage or killing quality." (Feeder-packer operation)

Deland Wells, Fonda, Iowa, kept records on 70 steers fed 'Stilbosol'-fortified supplement over 217-day feeding period. His figures showed that 'Stilbosol' was responsible for $42 extra income per head. (Farmer-feeder)

Stilbosol

(Diethylstilbestrol Premix, Lilly)

Lilly

'Stilbosol' is Eli Lilly and Company's trademark for Diethylstilbestrol Premix which is manufactured and sold under exclusive license granted by Iowa State College Research Foundation, Inc., under its U. S. Patent No. 2751303.

MAKERS OF **HYGROMIX** (*S. hygroscopicus* Fermentation Products, Lilly)

ELI LILLY AND COMPANY, AGRICULTURAL AND INDUSTRIAL PRODUCTS DIVISION, INDIANAPOLIS 6, INDIANA

UNUSUAL CAGE EQUIPMENT—A departure from the usual cage laying equipment is shown in these two photos. With automatic feeding and egg collecting, it is distinguished from the usual back-to-back design by special features. Between the two rows of cages is a U-shaped water trough. Below the trough and also running parallel between the cages is a chain conveyor which carries feed one way and carries eggs on the return trip to a central collection tray at the feed end of the unit. The cage floors slope inward toward the center rather than outward away from the center line. Feed is metered automatically before going into the conveyor. The manufacturer is Hayes-te Equipment Corp., Unionville, Conn. Other features are time clock operation, automatic egg counters and automatic water trough cleaners. Cages will be available in a number of different sizes. The unit can be laid out up to 500 ft. long. In the first picture the feed hopper and metering device are visible at far right. The feed conveyor (center) becomes egg conveyor (bottom) on return trip. In the second view, the egg conveyor is hidden below the feed trough.

Wenger

PACKAGED UNIT

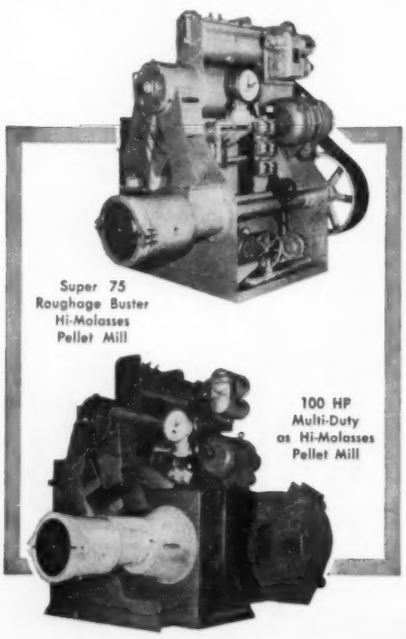
Pellet Mills

Complete Integration of Every Pelleting Component:

- Hard Pellet Mill
- Liquid Conditioning Feeder (1 or 2 liquids)
- Metered Flow Pump or Pumps
- Meter for each liquid
- Pellet Mash Feeder
- Steam Conditioner
- Hi-Speed Mixer or Multi-Blender
- 1 Minute Changeover from pellets to Wenger-blended mash feeds
- Control Panel for entire pelleting system
- Automatic controls throughout
- Optional Hi-Molasses pellet extruder

Never satisfied with things as they have been, Wenger engineered the Multi-Duty for lowering costs and improving production.

50 HP Multi-Duty with Draver type percentage Feeder (motorized variable speed drive optional)



Super 75 Roughage Buster Hi-Molasses Pellet Mill

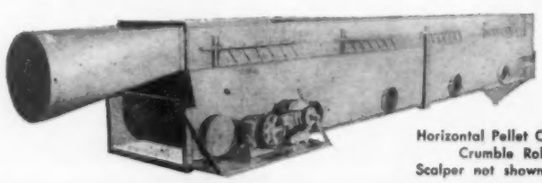
100 HP Multi-Duty as Hi-Molasses Pellet Mill

Multi-Duty produces every major type of feed in demand today from a single packaged unit Pellet Mill

- Hard pellets (with or without liquids)
- Wengerblended mash feeds (1 or 2 liquids)
- Hi-Molasses pellets (optional)

Only WENGER Multi-Duty Offers such ECONOMIES

- in total equipment cost
- in man hours per ton of production
- in operations
- in liquid proportioning
- in floor space
- in installation costs
- in minimizing contamination hazards



Horizontal Pellet Coolers, Crumble Rolls and Scalper not shown here.

Write for complete information.

Wenger Mixer Manufacturing
SABETHA, KANSAS PHONE 111

Standard of the Industry for Liquid Feed Mixing, Pelleting and Cooling Equipment.

Grain Terminal Being Built in Washington

PORTLAND, ORE.—River Grain Terminal, Inc., has signed a lease with the Walla Walla (Wash.) County Port Commission for construction of an 800,000 bushel grain handling facility at Burbank, in the northwestern part of that county.

Construction has started on the $500,000 unit, which is expected to be in operation by July 1. The modern barge grain handling facility will be one of the largest on the Columbia-Snake River system.

It will handle grain from three northwest states and will be constructed of steel and equipped with modern, fast handling equipment.

The terminal will feature a 300,000-bu. barge loading elevator contained in 10 tanks; barge-loading belt and tower capable of loading a 1,000-ton barge in two hours; truck-unloading capacity of 80,000 bushels per day; a hydraulic truck dump and a separate truck and rail pit, and a bulk grain storage warehouse of 500,000 bu. capacity.

Officers of River Grain Terminal are Russell C. Woolcock, Colfax, president; Joe L. Myers, Colfax, vice president; Del C. Smick, Connell, vice president; Earl Endsley, Lacrosse, secretary, and Donald H. Ruse, Portland, treasurer.

Plans Made to Rebuild Grandin Mill in N. Y.

JAMESTOWN, N.Y.—Plans are being made to rebuild the "corn plant," or east wing, of the Grandin Bros. Corp. mill at Jamestown.

The upper four floors of the five-story structure were almost completely destroyed and the first floor was damaged badly in a fire March 6.

The east wing of the mill housed rolling mills, sifting, grading and dust cleaning equipment, as well as other specialized machinery used in processing corn for poultry and livestock feed.

WIN HANDBALL TITLE

MEMPHIS—Giles Coors, Jr., Fred Lovitt & Co., Memphis, joined with Jack Gillespie in winning the Memphis city handball doubles championship. Mr. Coors was beaten in the city singles final, however, by Erskine Williams, Jr., defending champion, 21-13, 21-20. Mr. Coors trades in oilseed meal futures for his firm on the Memphis Board of Trade. Recently Mr. Coors took the Leslie M. Stratton YMCA singles crown.

SCROGGINS GRAIN CO.
Phone FE 5-3913 — Teletype: MP 344
WHOLE and GROUND GRAINS and SCREENINGS
MINNEAPOLIS, MINNESOTA

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

MOST POWERFUL ANTIOXIDANT
Griffith's G-12
FOR LOW-COST STABILITY OF FATS

BUTLER

POLLYPHOS...OFFERS....

Feed and Mineral Manufacturers

19%

Phosphorus for LESS Cost!

YES . . . it is **true** . . . BUTLER POLLYPHOS offers the feed and mineral manufacturer in the western half of the United States, a defluorinated phosphate with an all time high phosphorus content of 19% . . . a minimum 32%—maximum 35% calcium and no more than .19% fluorine . . . at the **lowest** delivered cost per unit of phosphorus.

These are important factors to consider . . . when next purchasing your phosphorus requirements.

When you buy BUTLER POLLYPHOS you are assured of getting the maximum in return for your phosphorus buying dollars . . . whether in bags, or in bulk, truck or carload lots, you receive more for less cost.

Contact the sales agent nearest you, or our home office, for additional information regarding the advantages BUTLER POLLYPHOS can offer you.

BC 5812

Butler
CHEMICAL COMPANY

BUTLER CHEMICAL COMPANY

P. O. Box 938 Phone OR 2-7587 Galena Park, Texas

LOCATED ON THE HOUSTON SHIP CHANNEL

SALES AGENTS: Warner Brokerage Co., Inc., Minneapolis; Carroll Swanson Sales Co., Des Moines; James P. Sprigg Co., Los Angeles; Feed Products, Inc., Denver; White Star Concentrates Co., Portland; E. A. Towns Limited, Vancouver 1, B.C.

VAN DUSEN HARRINGTON
DIVISION
F. H. Peavey & Co.
GRAIN SOYA BEANS FLAX
Founded 1852
MINNEAPOLIS DULUTH

any way you look at them . . .
the Finest Elevators
are built by
YOUNGLOVE CONSTRUCTION COMPANY
2015 Seventh Street Sioux City, Iowa
PHONE
5-3591

BUFFALO AND ANTIBIOTICS

Hong Kong Feed Man Brings Together Modern Feeds, Ancient Farming Methods

By Arthur R. Cole

It's taken a long time, but Hong Kong farmers are finally beginning to listen to Chong Mun Kwong.

A wholesale feed dealer operating out of a shop on Des Voeux Road, he has been telling them that his antibiotic feed mixture for hogs and poultry increases rates of gain and lay substantially over rates they've known in the past.

The modern antibiotic feed is part of a stock that also includes feed for water buffalo used by farmers of the island in tilling their soil. And their tenacious clutch to ancient farming methods makes modern formula feed something rather difficult to accept.

But Chong Mun Kwong points out that an awareness of the value of scientific feed is growing, and that the Chinese—who make up 98% of the population — are breaking away from ancient methods long enough to accept the fact that modern feed is more than exaggerated sales talk.

EDITOR'S NOTE: U.S. feed manufacturers who think they have problems with quality control should find it interesting to look at the woes of a Hong Kong feed dealer who mixes powders by the tablespoonful and additives by the pound. The dealer is Chong Mun Kwong, feed wholesaler who employs 10 men to handle 350 customers and gross sales of about 150 tons a month. He has been in the feed business 20 years, and has found "selling" Chinese farmers on modern feeds a real problem. His story is told here by Arthur R. Cole, a free lance writer who operates out of Singapore.

Mr. Chong's mixture for pigs includes calcium, cow's bones, corn, rice dust and other substances. His sales of this mixture are now about 35 tons a month at an equivalent cost of about $84 ton.

He pointed out a tin of the additive he uses for his pig and poultry feeds. Manufactured in London, it is packed by L. Sing & Co. The recommended levels of addition were 4 lb. per ton for turkeys and pigs and 2 lb. per ton for chickens.

Disease Prevention

Demand is also growing for a mixture containing a German powder used for prevention of scours and other diseases of calves, swine and lambs. Five tablespoonfuls of this powder are mixed with 100 lb. of ground dry feed for pigs of all ages to keep them in trim.

His store is one of four wholesale feed stores in Hong Kong, but added to these are some 30 big retail shops and numerous small dealers. He has been in his present store only four years after moving to it from another store on the same road when his growing business became too large for the former quarters. He has been in the feed business 20 years.

His best business is in green peas, corn and the mixtures for pigs and chickens, which are raised mostly in the New Territories. The New Territories are an area of some 270 square miles on the mainland and

DEPENDABLE SUPPLY . . . ANOTHER REASON WHY YOU CAN COUNT ON DALPAC BHT

There are many good reasons for the exceptional popularity of Dalpac BHT.

For one thing Dalpac is a top-quality feed antioxidant that promotes full assimilation of essential nutrients and protects vitamin potency. Dalpac also prevents rancidity of feed despite long periods of storage and transportation. For feed manufacturers Dalpac means additional profit because vitamin content is protected without over-fortification. And a little Dalpac goes a long way—just 4 ounces to the ton does the job.

Add to all that the fact that Dalpac is quickly available from any one of the locations listed at the right and you'll see why more and more feed manufacturers are finding that they can depend on Dalpac for the results they want.

Dalpac is available nationwide from:

McKesson & Robbins Chemical Branch Offices and Warehouses

ATLANTA 8, GA. 805 Peachtree Street, N.E.
BLOOMFIELD, N. J. 1246 Broad Street
BOSTON 9, MASS. 79 Milk Street
BUFFALO 7, N. Y. 1807 Elmwood Avenue
BURLINGTON, IOWA 100 North 4th Street
CEDAR RAPIDS, IOWA 900 Second Street, S.E.
CHICAGO 80, ILL. 540 West Randolph Street
CINCINNATI 2, OHIO 49 Central Avenue
CLEVELAND 3, OHIO 4500 Euclid Avenue
DALLAS 22, TEXAS 611 North Field Street
DAVENPORT, IOWA 117 Insurance Exchange Bldg.
DECATUR, ILL. 60 Industry Court
DENVER 2, COLO. 505 Kittredge Building
DES MOINES, IOWA 216 Elm Street
DETROIT 15, MICH. 12035 Mack Avenue
HOUSTON 11, TEXAS 515 Norwood Street
KANSAS CITY 1, MO. 1422 St. Louis Avenue
LOS ANGELES 22, CALIF. 5353 Jillson Street
MILWAUKEE 4, WISC. 531 South Water Street
MOBILE 9, ALA. 453 St. Anthony Street
NEW YORK 3, N. Y. 225 Fourth Avenue
OMAHA 1, NEB. 902 Farnam Street
PEORIA 1, ILL. 812 S. Washington Street
PHILADELPHIA 2, PENNA. 2418 Lewis Tower Building
PHOENIX, ARIZ. Central and Van Buren
PITTSBURGH 28, PENNA. 91 Central Square at Washington Road
PORTLAND 8, ORE. 630 N.W. 14th Avenue
PROVIDENCE 1, R. I. 68 Traverse Street
ST. LOUIS 2, MO. 904 Landreth Building
ST. PAUL 14, MINN. 2295 University Avenue
SAN ANTONIO 6, TEXAS 1110 Hoefgen Avenue
SIOUX CITY 6, IOWA 304 Pearl Street

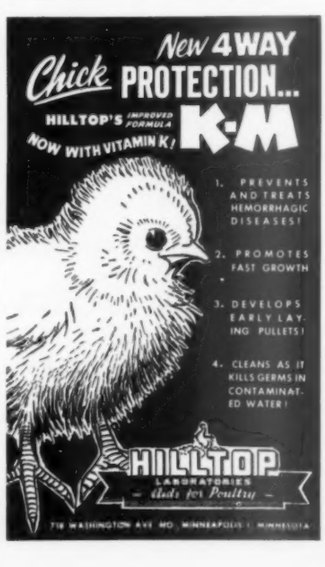
Warehouses at additional points adjacent to above cities

CHEMICAL DEPARTMENT, McKESSON & ROBBINS, INC.

DALPAC® FEED GRADE BHT
®HERCULES TRADEMARK

A Product of Oxychemicals Division, Naval Stores Department
HERCULES POWDER COMPANY INCORPORATED
900 Market Street, Wilmington 99, Delaware

NOS8-1


New 4WAY
Chick PROTECTION...
HILLTOP'S IMPROVED FORMULA
NOW WITH VITAMIN K!
K-M
1. PREVENTS AND TREATS HEMORRHAGIC DISEASES!
2. PROMOTES FAST GROWTH
3. DEVELOPS EARLY LAYING PULLETS!
4. CLEANS AS IT KILLS GERMS IN CONTAMINATED WATER!
HILLTOP LABORATORIES
Aids for Poultry
716 WASHINGTON AVE. NO., MINNEAPOLIS 1, MINNESOTA

Almost everybody who brings problems to Bemis (where flexible packaging ideas are born) likes the flexible solutions that Bemis creates out of 100-year experience, skill and just plain flexible imagination.

PROTECT YOUR VALUABLE FEED ADDITIVES! The laboratory standards of the antibiotics and other medicaments and supplements you use are as vital *after* mixing as before . . . so protect them *all the way* to the feeder with BEMIS PROTECTIVE BAGS. There is a Bemis Waterproof (laminated textile) Bag or Bemis Multiwall Bag (with protective barrier sheet) to meet your exact needs.

Bemis

BEMIS BRO. BAG CO.

Bemis may already be making the better package you need. Call, write, or ask your Bemis man.

ORIENTAL FEED BUSINESS—Chong Mun Kwong, a feed dealer in Hong Kong, has been having his troubles convincing farmers in the colony that formula feeds pay, but his business is growing. He has 350 customers now who use about 150 tons monthly. His store is shown in the first picture. While it doesn't show much evidence of modernization or merchandising, Mr. Chong is alert to scientific methods of feeding. In the second picture, Mr. Chong (wearing a suit coat) is shown with some of his ten employees and one of the trucks he hires for deliveries. His customers include farmers and retail outlets. He has one of four wholesale feed firms in Hong Kong.

including some outlying islands where the colony's agricultural industry is mainly concentrated.

The principal food animals raised in the New Territories are pigs and all kinds of poultry, including quail. The hill country is too steep and small in area to support grazing animals. Mr. Chong does, however, supply some feed for cattle, a few horses and some water buffalo.

Local cattle, which are used as draft animals and for beef, but not for milk, are small, hardy animals suited for work in the small, terraced fields typical of the colony's cultivated area.

Animal Population

Recent estimates of the animal population are: Chickens, 500,000; ducks, 100,000; pigeons, 30,000; pigs (breeding stock), 20,000; quail, 20,000; working cattle and buffalo, 18,000; dairy animals, 2,600; geese, 1,000; rabbits, 1,000; turkeys, 500, and goats, 300.

Specialist breeders are responsible for most of the pig and poultry raising, which is on an intensive system. More pigs and poultry could be raised among small farmers, but those whose main crop has been rice have shown little inclination toward animal raising because of lack of local feed, lack of experience and lack of capital.

Demand for food products in Hong Kong has been growing rapidly because of a rapid immigration of refugees from China. The population now is well over 2.5 million persons.

Pork production at present is about 12% of the colony's requirements, but the government is working toward improved management methods and production. From China come more than 500,000 live pigs annually to keep up this important part of the Hong Kong diet.

Newcastle Control

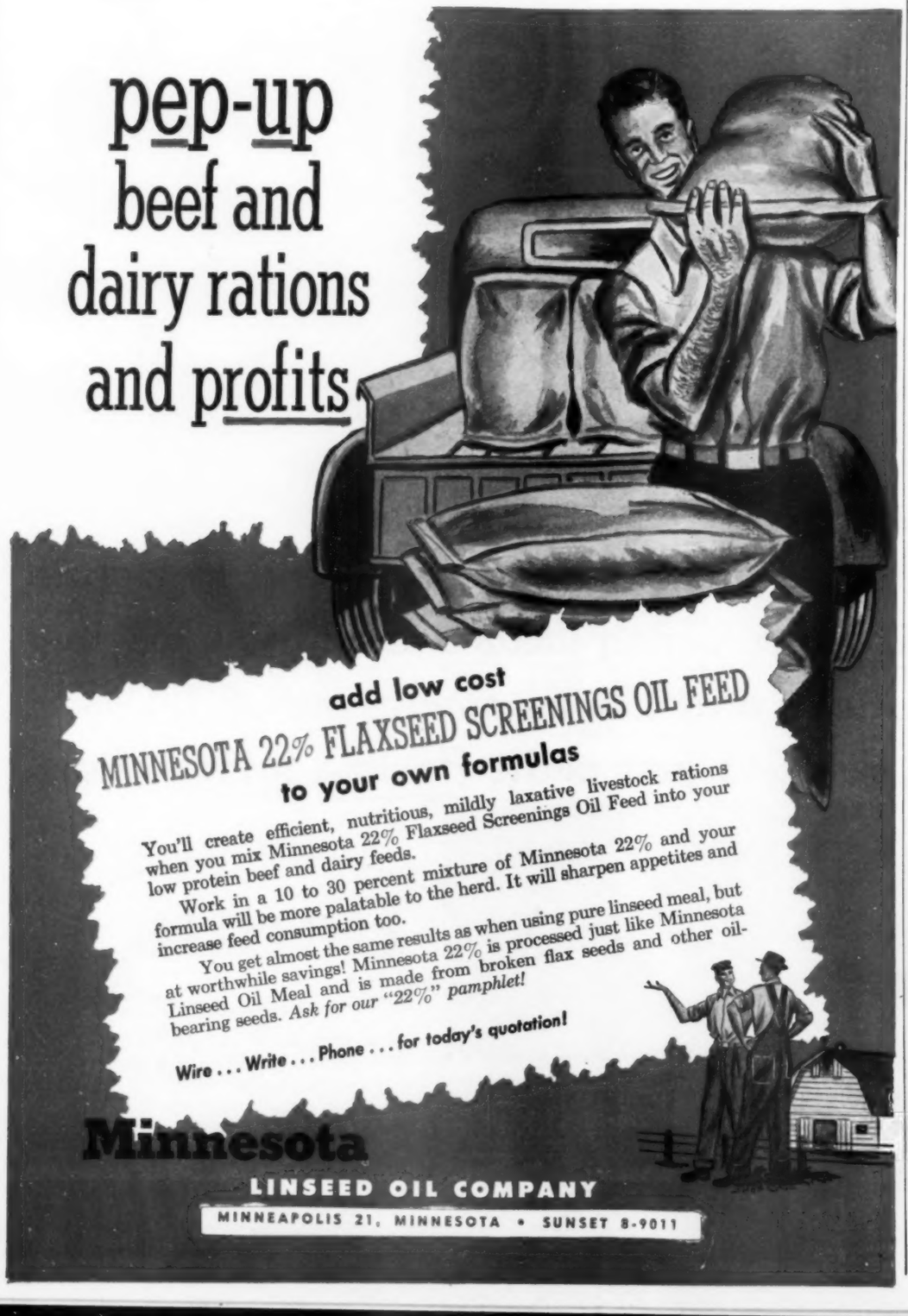
For eggs, the colony also depends largely on China. There are, however, several large egg farms in Hong Kong with imported birds, mostly White Leghorns. The duck population is also growing. Newcastle disease is kept under control with inoculation. Some 2 million doses of vaccine are used annually.

Mr. Chong said his best sales season comes during the months of September to February, because of the increase in production of pork and chicken in the colony during those months. The increased tempo results from preparations for the Chinese new year in February, and Mr. Chong's ten employees are busy through the season helping customers to prepare for it. His customers number about 350 retail stores and farmers.

Supplies for Mr. Chong's feeds come primarily from the colony, from China, Vietnam, Burma, Philippines, Thailand, South Korea and Australia. He buys and sells daily, including Sundays, and draws supplies from his warehouse, where he keeps about 50 tons of feed valued at about $4,500 in U.S. currency.

His monthly sales total is about 150 tons or $13,500 in U.S. currency. The feeds sell at a range of $60 to $110 a ton.

Besides feeders and retail stores, his customers include vegetable farmers who don't own rice land and buy bone meal for fertilizing. These small farmers depend entirely on fertilizers, including a growing use for chemical fertilizers, to make extensive use of their land.


pep-up
beef and
dairy rations
and profits
add low cost
MINNESOTA 22% FLAXSEED SCREENINGS OIL FEED
to your own formulas
You'll create efficient, nutritious, mildly laxative livestock rations when you mix Minnesota 22% Flaxseed Screenings Oil Feed into your low protein beef and dairy feeds.
Work in a 10 to 30 percent mixture of Minnesota 22% and your formula will be more palatable to the herd. It will sharpen appetites and increase feed consumption too.
You get almost the same results as when using pure linseed meal, but at worthwhile savings! Minnesota 22% is processed just like Minnesota Linseed Oil Meal and is made from broken flax seeds and other oil-bearing seeds. Ask for our "22%" pamphlet!
Wire . . . Write . . . Phone . . . for today's quotation!
Minnesota
LINSEED OIL COMPANY
MINNEAPOLIS 21, MINNESOTA • SUNSET 8-9011

For TOP Poultry Profits

PREVENTION of coccidiosis is not enough...

IMMUNITY must be developed early

GET BOTH *with* Trithiadol

TRADEMARK

IN BROILERS, to achieve best feed conversion, not only must coccidiosis be prevented but natural immunity should be developed as early as possible. You get both with TRITHIADOL . . . unlike other coccidiostats which may not adequately protect against coccidiosis or may delay, or even prevent development of immunity. TRITHIADOL'S vital double action of "early immunity" and effective protection results in BEST FEED CONVERSION and GREATEST PROFITS. By switching to TRITHIADOL, broiler growers have earned extra profits of from $7.50 to $39.68 per 1000 birds.

IN REPLACEMENT CHICKENS, feeding TRITHIADOL encourages "early immunity" which continues in the laying period. This lasting immunity means effective prevention of coccidiosis, assuring TOP PROFITS through MAXIMUM EGG PRODUCTION.

ONLY TRITHIADOL gives "umbrella" protection . . . effective prevention and lasting immunity against *all 5* commercially important species of coccidia: E. tenella, E. necatrix, E. acervulina, E. maxima, E. hagani. Chart on TRITHIADOL tests furnishes decisive proof of immunity.

PROOF OF "TRITHIADOL IMMUNITY" FOLLOWING EXPOSURE TO COCCIDIA

BASED ON WEIGHT GAINS AFTER CHALLENGE*

TEST	Coccidiostat	Species and Number of coccidia used in immunity challenge	Weight Gain After Challenge 7 days	14 days	Immunity Developed
1	TRITHIADOL	E. tenella—500,000 E. acervulina—2,000,000	13%	24%	YES
	TRITHIADOL		10%	20%	YES
	CONTROL—NONE	None	10%	20%	
2	TRITHIADOL	Mixed challenge of E. tenella—400,000; E. acervulina and E. hagani—2,000,000 each.	15%	39%	YES
	CONTROL—NONE	None	16%	42%	
3	TRITHIADOL	Mixed challenge of E. tenella and E. necatrix—400,000 ea., E. acervulina, E. hagani and E. maxima—2,000,000 each.	32%	59%	YES
	CONTROL—NONE	None	25%	54%	

Unpublished Data—from a series of tests involving chickens picked at random from field flocks.

*Criterion of immunity is weight gain after challenge with the 5 commercially important species of coccidia, as compared with normal growth of non-challenged group. Weight gain of challenged group should approximate that of non-challenged group to demonstrate solid immunity.

ONLY TRITHIADOL HAS ALL THESE MAJOR ADVANTAGES

1. Effectively controls all economically important species of coccidia.
2. Completely safe for poultry; harmless to other warm blooded animals.
3. Superior feed conversion and weight gain.
4. Permits immunity to develop early.
5. Displays no adverse effects on egg production, shell or interior quality.
6. Comparatively no effect on hatchability or fertility.
7. Is compatible with all commonly used feed ingredients.
8. Stable, free flowing, easily blended with feeds.

DON'T DELAY. Find out NOW how TRITHIADOL can help you earn top poultry profits through effective protection and early, lasting immunity against coccidiosis.

★SEE YOUR STERWIN TECHNICALLY-TRAINED REPRESENTATIVE or write . . . phone or wire collect.

STERWIN BRANCHES LOCATED AT: Atlanta, Buffalo, Dallas, Evanston, Ill., Kansas City, Mo., Los Angeles, Portland, Ore., Rensselaer, N. Y., San Francisco, St. Louis.

Sterwin Chemicals INC.

Subsidiary of Sterling Drug Inc.

1450 Broadway, New York 18, N. Y.

LAckawanna 4-6400

Economists Answer Questions On Development of Integration

What farm enterprises may be likely candidates for integration? In what parts of the nation will integration be most likely Who will do the integrating?

These are just some of the questions answered in a special report on vertical integration in agriculture which was prepared by the department of agricultural economics at Purdue University, Lafayette, Ind.

The report covers various phases of the subject, and following are some excerpts from the report which will be of interest to many feed men:

On the current farm scene, outright buying of the total farm unit is rare. Rather, various forms of partial ownership and "package" contractual arrangements have been used.

INTEGRATION DEFINED: The details of the contract-package can vary widely, but the main proposition remains the same. The key idea in integration is the extension of the effective area of control by the centralized management. The arrangement involves a transfer of all or part of the management decision-making to the integrator in return for a reduction of price and market risk. Such a definition of integration permits many variations in its actual development. All of the management and ownership responsibilities of the farm enterprise may be transferred or only special parts of management may be involved. Also integration may tie together all of the forms and processes involved in supplier-producer-marketer chain or it may tie together any two or more of these forms or processes within the total chain. Any of the firms may be the integrator—the farmer, the supplier, the processor, the retailers. Such integration may be achieved through outright ownership or contractual arrangement.

As background, it may be noted that the farm unit in most cases is made up of several enterprises, such as grain growing, hog production, egg production. Each enterprise is made up of three basic activities: (1) Acquisition of materials for production, such as feed and equipment. (2) Directing production activities such as feeding and care of livestock. (3) Marketing activities such as choice of market and selling activities.

Integration does not deal with the farm and the farmer as a whole, but rather with a particular commodity or enterprise of the farm.

WHAT CONDITIONS FAVOR INTEGRATION? An affirmative answer to the following questions means a favorable climate exists for some agencies to attempt to integrate a farm enterprise operation with some nonfarm activity. One, two or all of these may be present for a particular enterprise.

1. Is there a potential for the application of standardized and specialized management?

2. Is there a real possibility that the farm product can be produced in a specified form and quality and/or on a predetermined schedule of supply?

3. Is the enterprise facing a situation of rapid and/or continuous major changes in technology?

4. Is there a great potential for the profitable increased use of some production resource, such as equipment, capital or know-how?

5. Is there a possibility of reducing market risks?

6. Is there a special market opportunity for a new or different product?

7. Is there a chance to increase control over a larger share of the supply and improve price-bargaining power? (However, if decided advantages were realized because of such control, the integrator might be in violation of anti-monopoly laws.)

WHAT FARM ENTERPRISES MAY BE LIKELY CANDIDATES FOR INTEGRATION? In looking at the field of likely candidates, keep three facts in mind:

1. Successful widespread integration won't spring into being overnight. The nature of successful arrangements will be worked out by trial and error.

2. Even though the climate for integration might be favorable, if the producers and the industry are already organized and operating under other reasonably satisfactory arrangements, integration may not be forthcoming.

3. Integration might not be feasible for some parts of an enterprise, but would be for others. Conditions may favor complete or only partial integration of the three major activities of an enterprise.

(See Table 1 for an evaluation as to probable current answers for the most important commodities.)

A summary of integration potentialities follows:

Broilers: At least 80% of the current production is under control of a contracting integrator. Development here will continue in the refinement of contracts.

Turkeys: Some integration now present. Increasing attempts will be made—probably similar to broilers.

Egg production: A few examples now exist. Potentialities of standardized management, product control and rapidity of technological change make increased integration efforts likely.

Hogs: Scattered experimental integration attempts are now under way. Production of meat type hogs under special feeding programs is being considered. New technologies could give increased incentive for efforts by processors and feed companies. Growth of integrated operations will be slow and spotty.

Beef: Experimental efforts in fattening cattle under contract now exist. Also, some packers operate their own feeding operations. Many producers would like to reduce market risks. Though it does not now appear that extensive integration will develop immediately, experimental attempts will bear watching.

Dairy herds and milk: Some com-

All Lime Crest trace-mineral pre-mixes, both standard and custom made, are under rigid laboratory control. That control begins with the ingredients and doesn't end until the final product has been checked.

Because of Lime Crest's complete laboratory control (both chemical and spectrographic methods are used) the feed manufacturer who uses Lime Crest trace-mineral pre-mixes need not worry that his feeds contain too little or too much of the trace minerals his nutritionist has specified.

LIME CREST TRACE-MINERAL PRE-MIXES

Made by LIMESTONE PRODUCTS CORPORATION OF AMERICA, NEWTON, NEW JERSEY

World's Largest Producer of Crystalline Calcite Products

CANADIAN DISTRIBUTOR: The Ash Chemical Co., 353 St. Nicholas St., Montreal 1, P. Q.

Marion MIXERS

ELIMINATE GUESSWORK IN MOLASSES MIXING!

Complete accuracy in Molasses mixing bag after bag!
One mixer For All Your Mixing Needs.
Mixes Both Dry and Molasses Feed.
SEND FOR FREE LITERATURE:

RAPIDS MACHINERY CO.

887 11th Street Marion, Iowa

TABLE 1

Factors favoring integration attempts	Enterprises: Broilers	Turkeys	Eggs	Hog feeding	Beef feeding	Milk
Is there a potential for application of standardized and specialized management?	++	++	++	+	+	+
Is there is real possibility that the farm product can be produced in a specified form and quality and/or on a predetermined schedule of supply?	++	++	++	+	+	+
Is the enterprise facing rapid and/or continuous major changes in technology?	++	++	++	++	++	+
Is there a great potential for the profitable increased use of some production resource? (capital, labor)	++	+	+	+	+	+
Is there a possibility of reducing market risks?	++	++	++	+	+	+
Is there a chance to increase control over a larger share of the supply and improve price-bargaining power?	+	—	—	—	—	—

++; factor now exists in a substantial degree; probably a powerful factor favoring integration attempts.
+; factor either now exists or substantial development appears on the horizon; permits integration attempts.
—; factor does not exist in great enough degree to encourage integration attempts in of itself.

pletely integrated operations now exist. However, the dairy industry already is highly organized and to a considerable extent operates under milk control orders. No major new integration development seems imminent.

IN WHAT PARTS OF THE COUNTRY WILL INTEGRATION BE MOST LIKELY?

1. Integration will be attempted where producer efforts can be obtained by the integrators at lowest costs. Integrators generally will supply management supervision, financial and technical help. They will attempt to find grower-cooperators where these things are needed most. This means areas of low income and plentiful labor and where production is now highly specialized or highly efficient. Areas already highly specialized and efficient won't likely be involved in early attempts. For example, integration in pork and beef raising will be attempted first in areas immediately surrounding the current commercial, specialized region. Egg integration may come first either in secondary production areas or in new areas where producers need a new enterprise and will cooperate for a relatively low payment.

2. Integrations will occur first in areas where large firms are involved. Integration requires extensive resources and capacity to undertake sizeable extension of the integrator's work. Small concerns won't have either the management or financial resources to undertake successfully the added risk of being an integrator.

3. Where specialty products are involved, integration will occur in scattered locations largely surrounding the integrator's handling or processing facilities. The motivation will be to obtain nearby, dependable supply in quantities and qualities desired.

WHO WILL DO THE INTEGRATION? The list of potential integrators includes: farmers and their organizations, food retailers, food wholesalers, processors, buying agencies and major suppliers such as feed firms, hatcheries, equipment manufacturers, etc.

Over the long run, it would seem that retailers themselves may be among the most important integrators. The change in the last decade at the retail level to very large retail units and their combination into regional or national chains makes retailer participation in the rest of the marketing process more feasible. However, in the immediate future, it seems more likely that initial action will come from agencies more closely associated with the farm, such as

PRO-GEN
ARSANILIC ACID ADDITIVE
Get it in the Midwest from
Carroll Swanson Sales Co.
620 D. M. Bldg., Des Moines, Ia., Tel. CH. 4-5177

FISH MEAL · FISH SOLUBLES
LIVER MEAL—VITAMIN OILS
FEATHER MEAL—FEED INGREDIENTS
ALBUMINA SUPPLY CO., INC.
82 Beaver St., New York 5, N. Y.

keep fully covered by handling
Shellbuilder
pure crushed reef oyster shell
Shellbuilder Co.
Melrose Bldg. • Houston, Texas

Special Report to Feed Manufacturers . . .

PRO-GEN (Arsanilic Acid) in Protein Supplements for Swine

By Douglas V. Frost and Henry S. Perdue

Practical tests firmly establish the safety and efficiency of this growth stimulant in protein supplements

For almost six years, PRO-GEN® (Arsanilic Acid, Abbott) has been used effectively in complete starter and grower feeds for swine. The extent of the benefits varies considerably—depending upon the health of the pigs or hogs. If disease organisms are present, an increase in growth rate and feed efficiency results. When little real or sub-clinical disease is present, the response may be less.

Practical experience has proved that ideal conditions with low levels of disease are difficult to achieve under practical farm conditions. With average or even good farm conditions, the increases in daily gains and feed efficiency from Arsanilic Acid have been very good.

Recent research also firmly establishes the safety and effectiveness of PRO-GEN (Arsanilic Acid) in protein supplements for feeding with grain.

Deliberate tests were made to see if any conceivable farm condition would cause hogs to eat unusual amounts of supplement and consequently increase the Arsanilic Acid intake above recommended levels. Some tests were made on unpalatable grains. In others, the protein supplement was fed intermittently to see if protein starvation might cause excessive consumption when the supplement was again made available.

These tests showed that the hogs adjusted their protein intake so that excessive amounts of Arsanilic Acid were not consumed. Thus there is a wide margin of safety for Arsanilic Acid in protein supplements.

First experiments with Arsanilic Acid in protein supplements were reported by Hanson, Ferrin and Singh in 1955 at the University of Minnesota. Later Hanson and Hill, and Hanson, Hill and Meade reported no symptoms of toxicity in free-choice feeding experiments when hogs consumed Arsanilic Acid at twice the recommended level even when oats were fed as the only grain. Arsanilic Acid promoted growth with this method of feeding and improved feed conversion.

In studies at South Dakota State College, Wahlstrom, Kamstra and Olson reported 0.06% Arsanilic Acid highly effective in counteracting selenium toxicity in 40% protein supplement. This exended the earlier findings at South Dakota showing the unique protective value of Arsanilic Acid in selenium-containing feeds for various species.

Experiments at the Abbott Research Farm support and extend these experiment station findings. A 30% protein concentrate was fed free-choice with shelled corn. Some groups of pigs in the experiment were offered supplements containing five times the recommended maximum level. However, no objective symptoms of toxicity were observed and no pathologic changes were noted at slaughter.

For best results, swine supplements should contain enough Arsanilic Acid so that 45-90 grams is provided per ton of total feed eaten. To achieve this, the amount of PRO-GEN (Arsanilic Acid) varies with the protein level of the supplement . . .

Protein Level	Recommended PRO-GEN (Arsanilic Acid) Level
20% Protein	0.02% (180 Gm. per ton)
25% Protein	0.03% (270 Gm. per ton)
30 to 35% Protein	0.04% (360 Gm. per ton)
35 to 40% Protein	0.05% (450 Gm. per ton)

In protein supplement feeding tests at the Abbott Research Farm, meat-type feeder pigs were wormed and placed on a 12-week dry-lot feeding test during the summer of 1957. The pigs were self-fed a commercial *40% protein supplement* fortified with 0.05% Arsanilic Acid. The shelled corn was also self-fed.

In the 12-week test, the 44½-lb. weanling pigs gained an average of 140 lbs. at a feed cost of only $8.47 per cwt. Arsanilic Acid intake was 85 grams per ton of total feed. (The recommended level in complete feeds is 90 grams per ton.) Feed requirements and basic costs were . . .

Corn	2.45 lbs. per lb. of gain
40% Protein supplement	0.56 lb. per lb. of gain
All Feed	3.16 lbs. per lb. of gain
Arsanilic Acid	85 Gm. per ton of total feed

Corn at $1.16/Bu.	$5.05
40% Protein Supplement at $120/ton	$3.36
Arsanilic Acid	.06
Total Feed cost/100-lb. gain	$8.47

These experiments demonstrate the safety, efficacy and economic value of Arsanilic Acid in protein supplements for swine. They indicate that PRO-GEN (Arsanilic Acid) merits full consideration for use in protein supplements on a safe and effective basis.

For more detailed reports on safety and feeding efficiency tests of Arsanilic Acid in all types of swine rations, write or call—Abbott Laboratories, Chemical Sales Division, North Chicago, Illinois.

804498

processors and suppliers. Of course, the initiator may attempt to tie together all the pertinent firms in handling the product.

Farmers themselves, or their organizations, may become integrators only under pressure. This pressure may appear from two sources: (1) The necessity to obtain a set-up which gives legal sanction of marketing orders and agreements in order to improve their price position. (2) Pressure to establish counter-bargaining power when integration by non-farm agencies has become a major factor and seems to be exploiting the farmer. The stage is set for exploitation of the producer if he has few suppliers, few markets, few contractors or integrators.

CONCLUSIONS: Some commodities will receive more attention from integrators than others, and different areas will be affected differently. Complete farm-to-consumer integration is not expected to occur or be attempted in the foreseeable future. The broiler situation is not likely to be duplicated in other enterprises.

Integration does not make a small, inefficient farm business profitable. Management remains a scarce resource. Whoever can supply this management most effectively and economically will retain or gain control.

Consequences: Even partial integration will tend to have certain consequences. Some of these are:

1. For producers who have basic abilities for efficient production but have lacked financing, good equipment or technical information, integration offers a way to overcome the handicaps. It also may aid beginners, and in a multi-enterprise unit, integration of one enterprise may help the farmer better manage other enterprises.

2. For producers who are fundamentally below average even if properly financed and helped, integration will simply speed up the day when they will have to find more advantageous employment. Some of these farmers may look to integration as a chance for survival, but this would be only temporary.

3. Successful integration will generally speed up changes now under way, such as more standardization and specialization and adoption of new technology.

4. Integration will probably result in increased geographic concentration of production. New areas of important production may actually develop. Competition between regions will be intensified and the weeding out of higher cost areas will be speeded.

5. If integration develops to where it covers a substantial majority of the production in a limited area, independent producers will find it increasingly difficult to obtain services of suppliers and/or market agencies at favorable prices in the immediate area.

6. As long as producers may choose among several integrators in a given area, competitive conditions may remain as vigorous as ever. If a few integrators gain dominance, potential evils of monopoly may exist. Then government supervision or development of strong counter-bargaining agencies may be necessary.

7. The current areas of highly specialized and efficient producers won't be involved in early efforts of integration. Better producers and interested non-farm agencies in those areas will be able to obtain the advantages of integration through various arrangements which will still leave effective management in the hands of skilled managers. How such areas would fare in the long run is not certain. The permanency of integration efforts as a way of obtaining coordination and control is still to be tested. As it develops, counter-developments of other types of organizations may be encouraged.

Colorado Cattlemen Consider Pellet Test

DENVER — Complete pelleted cattle rations may get a full-scale test under normal feedlot conditions with a large number of animals in Colorado.

Such an experiment is now under consideration by the nutrition committee of the Colorado Cattle Feeders Assn. The committee was appointed to look into the possibility by the association board of directors following a recent board meeting.

Larry Mancini, secretary of the association, reported on the board's decision and discussed the need for such a test in his column "Over the Feed Bunk" in a recent issue of The Record Stockman, a Denver livestock paper.

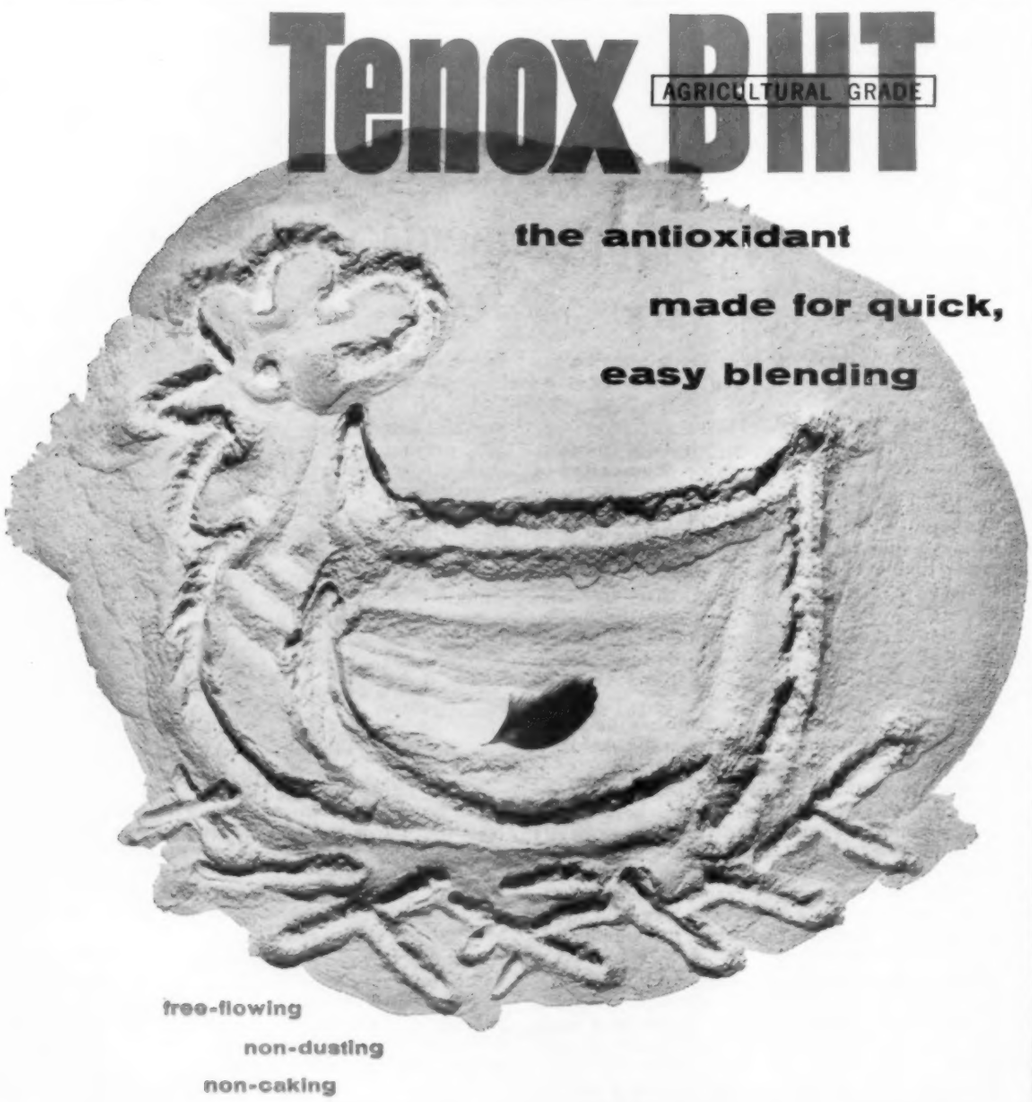
Pointing out that feeding a complete (roughage and concentrate) pelleted ration has been in the experimental stage for some time, Mr. Mancini said, "It is likely that in the near future feed manufacturers will be in the field merchandising complete pelleted rations."

However, since most experiments have been with small number of animals and under entirely different conditions than might exist in a feedlot operation, cattle feeders do not have sufficient information on the value of this type of feeding under practical feedlot conditions, he said.

"It would be a definite advantage to cattle feeders in general if they had some idea what might be expected in the way of gains, cost of gains, etc., when such a product comes into being," he continued.

"With this thought in mind, directors feel that a field test involving large numbers of cattle under normal conditions might supply members of the feeding industry with important facts and figures. The nutrition committee has been given responsibility of further studying such a project to see if a field experiment can be arranged."

He said college researchers will be approached "to guide such an experiment in the proper channels and provide the technical supervision and accumulation of data."



Eastman's new Tenox BHT-Agricultural Grade has been especially developed to meet the needs of feed manufacturers. This new form of Tenox BHT is supplied as a free-flowing, non-dusting powder, in a particle size comparable to that of other feed components. It blends rapidly and homogeneously in mixing operations, and does not separate during handling or storage.

Although Eastman has had many years of experience in food antioxidants, we did not rely on this alone in developing Tenox BHT-Agricultural Grade. We talked to feed manufacturers, asking them about their storage problems... their blending machinery and methods... their preference in particle size. Only then did we complete the development work on Tenox BHT-Agricultural Grade, giving it the free-flowing, non-dusting, non-caking characteristics manufacturers wanted.

When you add Tenox BHT-Agricultural Grade to your feeds, you protect their sensitive vitamin content. At the same time, you help poultrymen improve pigmentation and guard their flocks against deficiency diseases such as encephalomalacia.

Since this form of Tenox BHT *is* new, be sure you specify "Agricultural Grade" when ordering. For additional information concerning Tenox BHT-Agricultural Grade, and how you can use it in the feeds you make, write to EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; New York City, 260 Madison Avenue; Framingham, Massachusetts, 65 Concord Street; Cincinnati, 1813 Carew Tower; Cleveland, 13212 Shaker Square; Chicago, 360 North Michigan Avenue; St. Louis, 10 South Brentwood Boulevard; Houston, 1300 Main Street. **West Coast: Wilson Meyer Co.,** San Francisco, 333 Montgomery Street; Los Angeles, 4800 District Boulevard; Portland, 520 Southwest Sixth Avenue; Salt Lake City, 73 South Main Street; Seattle, 821 Second Avenue.

THAT GOOD
UNIFORM
MEDO GREEN
ALFALFA
BREMCO
ALFALFA MILLS, Inc.
NEW BREMEN, OHIO
PHONE - 3251 & 3221

Use Your Own Salt and Calcium with Herman Nagel's Formula B
...to Supply Every Needed Mineral
In a form so soluble "it melts on your tongue."
The HERMAN NAGEL Co.
83 W. Jackson Blvd.
Chicago 4, Illinois

It's continuous!

SOLULAC

70% corn distillers solubles
30% corn distillers grains

It goes on every week — like the production and availability of Solulac! That's why those who formulate feeds with Solulac always are confident of a *continuous* supply. Now is a good time for you to start with Solulac, to make use of its high nutritional values, its unidentified growth factors and vitamins. Guaranteed to be free flowing. Available in 50 and 100 pound bags or bulk carloads. Write, wire or phone. Grain Processing Corporation is also a *continuous* source of corn distillers dried grains.

Copyright 1958

GRAIN PROCESSING CORPORATION

MUSCATINE, IOWA • Telephone AMherst 3-1321 TWX 495

Primary Fermentation Products

Riboflavin — Vitamin B-12 — Bacitracin — GP-101, source of whey and other unidentified growth factors.

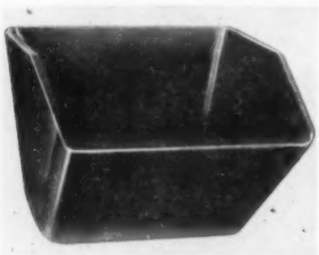
Worth Looking Into

New Products
New Services
New Literature

This reader service department announces the development of new and improved products, new services and new literature offered by manufacturers and suppliers. Claims made in this department are those of the firm concerned. Use the accompanying coupon to obtain the desired information.

No. 6039—Plastic Elevator Bucket

Details of performance tests of a plastic elevator bucket have been announced by the Dura-Buket Division, National Oats Co. The bucket is formed in one piece, without interior seams. It is designed for high speed use, and will also perform at lower belt speeds, according to the company. The buckets are static-free, resist abrasion and will not corrode or shatter, it is claimed. Check No. 6039 on the coupon and mail it to this publication. Please print or type name and address.



No. 6041—Weight Indicator

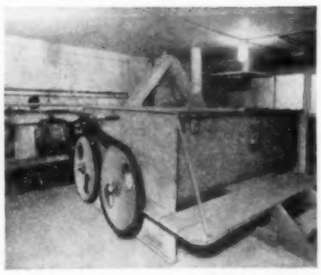
An improved version of the "Weightograph" projection type weight indicator has been announced by the Howe Scale Co. The unit projects the actual weight on a large illustrated screen in a nonprotruding, eye-level periscope housing. Several models are available. Specifications and literature may be secured by checking No. 6041 on the coupon and mailing it to this publication. Please print or type name and address.

No. 6036—Ceramic Magnet Pulley

Changes in magnetic pulley design have been announced by Stearns Magnetic Products Division, Indiana Steel Products Co. Company officials say that "Index V" ceramic permanent magnets energize the new pulley, producing a magnetic field that effectively removes tramp iron from fast-moving conveyor burdens. Standard widths of 12 in. on up are available. Check No. 6036 on the coupon and mail it to this publication. Please print name and address.

No. 6042—Twin Mixer

The Rapids Machinery Co. has introduced the "Marion Twin Mixer" for heavy duty mixing up to three tons capacity on either dry or molasses feed. A four-ton capacity model is also available for dry mixing. The mixer has twin arms and blades, and features a four-way mixing action that tumbles the mix from ends to center and also from side to side, the manufacturer states. The unit has a heavy roller chain drive powered by a motor and heavy duty gear reduction unit. The over-all length is 140 in. and the width 94 in. with inside dimensions of 120 in. by 82 in.



The shell is 51 in. high. Literature may be obtained free by checking No. 6042 on the coupon and mailing it to Feedstuffs.

No. 6037—Salt Block Carrying Device

A new carrying device has been developed by the International Salt Co. for its 50-lb. "Sterling Farm Salt Blocks." The device is made of leather belting with stainless steel grips at each end. Check No. 6037 to secure details. Please print or type name and address on coupon.

No. 6033—Corn Drying Bulletin

Corn Industries Research Foundation, Inc., has prepared a bulletin entitled, "The Overheating of Corn by Artificial Drying." The bulletin contains an appeal to "help keep drying temperatures down." Check No. 6033 on the coupon and mail it to Feedstuffs. Please print or type name and address.

No. 6038—Platform Truck

The "All-Purpose Platform Truck" manufactured by the Colson Corp. has been redesigned to include new features. Among them are removable handles which enable the truck to be converted to suit specific handling needs. Secure details by checking No. 6038 on the coupon and mailing it. Please print or type name and address.

No. 6040—Brooder Line

A new folder describing the "Brower Kero-Gas" brooder has been produced by the Brower Manufacturing Co. The folder states that the brooder has no stovepipe and heats the entire house. Check No. 6040 on the coupon and mail it to Feedstuffs to secure the folder. Please print or type name and address.

No. 6035—Bulk Shipping Containers

A revised bulletin on bulk handling individualized shipping containers has been announced by Sprout, Waldron & Co., Inc. Bulletin 132-A describes steel, stainless steel and aluminum designs for railroad or truck shipment of raw and semi-processed materials. Check No. 6035 on the coupon and mail it to Feedstuffs. Please print name and address.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number on the coupon and forwarding it to Feedstuffs.

No. 5972—Swine feeding program report, Merck & Co., Inc.

No. 5974—Manual on cage layer plants, available without cost in trade area of Beacon Milling Co., small charge made elsewhere.

No. 5975—Filling and weighing unit for open mouth bags, Chase Bag Co.

No. 5976—Production line bag closing for small bags, Minneapolis Sewing Machine Co.

No. 5977—Red-colored whey block, Western Condensing Co.

No. 5978—Automatic liquid seed treater, Panogen Co.

No. 5979—Calf nursing product, R. L. Kuss & Co., Inc.

No. 5980— Computer for determin-

Send me information on the items marked:

☐ No. 6033—Corn Drying Bulletin	☐ No. 6038—Platform Truck
☐ No. 6035—Bulk Containers	☐ No. 6039—Plastic Buckets
☐ No. 6036—Magnet Pulley	☐ No. 6040—Brooder Line
☐ No. 6037—Carrying Device	☐ No. 6041—Weight Indicator
	☐ No. 6042—Twin Mixer

(PLEASE PRINT OR TYPE)

Others (list numbers) .....

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Feedstuffs

P. O. Box 67,

Reader Service Dept. Minneapolis 1, Minn.

CRITICAL
about cutting vitamin fortification costs?

Amburgo's famous *basic ingredient* supplies ALL your B Vitamins while contributing known necessary Unidentified Growth Factors. And at LOWEST POSSIBLE COST, because it is 100% *growth* activated — NO filler material. Start saving now, with

NEW IMPROVED
Amburgo
SUPERTRATE
with UNIFAC

Each 50 lb. bag supplies:

- *100% plus of the four known required* Unidentified Growth Factor sources*
  - FISH FACTOR
  - FERMENTATION SOLUBLES
  - GRASS JUICE & WHEY
  - UNKNOWN MINERAL NUTRIENT
- *Optimum levels of B Vitamins for growth and energy*

★ *PLUS the richness of 40 lbs. of Condensed Fish Solubles in a dry form*

It's by AMBURGO—*naturally*

THE AMBURGO CO., INC.
1315-17 Walnut Street
Phila. 7, Pa.
WAREHOUSES IN PRINCIPAL EASTERN CITIES

*According to Cornell Univ. Bulletin No. 44

Paul M. Visser

VICE PRESIDENT — The board of directors has elected Paul M. Visser as vice president of the Gardner Advertising Co., St. Louis. Mr. Visser handles the account of Eli Lilly & Co., Indianapolis, manufacturer of Stilbosol and Hygromix feed supplements. Before joining the Gardner agency he was with the National Broadcasting Co. at Chicago, where he became NBC director of agriculture and supervised the National Farm and Home Hour. He was also involved in the original planning of a number of major early television shows. He is a graduate of Iowa State College with a degree in agriculture and majors in animal husbandry, journalism and speech.

ing feed supplement needed in rations, Nutrena Mills, Inc.

No. 5981—Pocket guide for buyers of feed grains and protein supplements, Agri-Chart Co.

No. 5982—Engineering changes in grain driers, Aeroglide Corp.

No. 5983—Poultry breed specifications brochure, Babcock Poultry Farm, Inc.

No. 5984—12-in. diameter roller mills for flaking and crimping of grains, Ross Machine & Mill Supply.

No. 5985—Corn Sheller for "Feedmobiles," Daffin Manufacturing Co.

No. 5986—Dust separator, Day Co.

No. 5987—Pellet mill with redesigned features, California Pellet Mill Co.

No. 5988 — Baler-sealer, Tol-O-Matic, Inc.

No. 5989—V-Belt booklet, Goodyear Tire & Rubber Co.

No. 5990—Telescoping boxcar and truck loading conveyor, Power-Curve Conveyor Co.

No. 5991—Air-supported structure, CID Air Structures Co.

No. 5992—Catalog of dial scales, Howe Scale Co.

No. 5993—All-weather salt, International Salt Co.

No. 5994 — Dual-purpose hopper, Richardson Scale Co.

No. 5995—Grain aeration system, Dunbar Kapple.

No. 5996—Bulk-type self-feeder for hogs, James Manufacturing Co.

No. 5997 — Laboratory mixers, Sprout, Waldron & Co., Inc.

No. 5998—Animal health "wheel" for selecting health precautions for livestock and poultry, Chas. Pfizer & Co., Inc.

No. 5999—Truck body conversion, Simonsen Manufacturing Co.

No. 6000—Bulk feed body brochure, Baughman Manufacturing Co.

No. 6001 — Newly-designed chick feeder, Honeggers' & Co.

No. 6002—Folder on laying hen, Pillsbury Mills, Inc.

No. 6003—Coccidiostat-growth additive, Dr. Salsbury's Laboratories.

No. 6004 — Serrated-edge hard-faced hammer for hammermill, Paper-Calmenson & Co.

No. 6020—Coccidiostat, Merck & Co., Inc.

No. 6030—Premix program, Peter Hand Foundation.

No. 6032 — Hammermill bulletin, Seco, Inc.

No. 6043—Air elevator for moving pellets, Clute Corp.

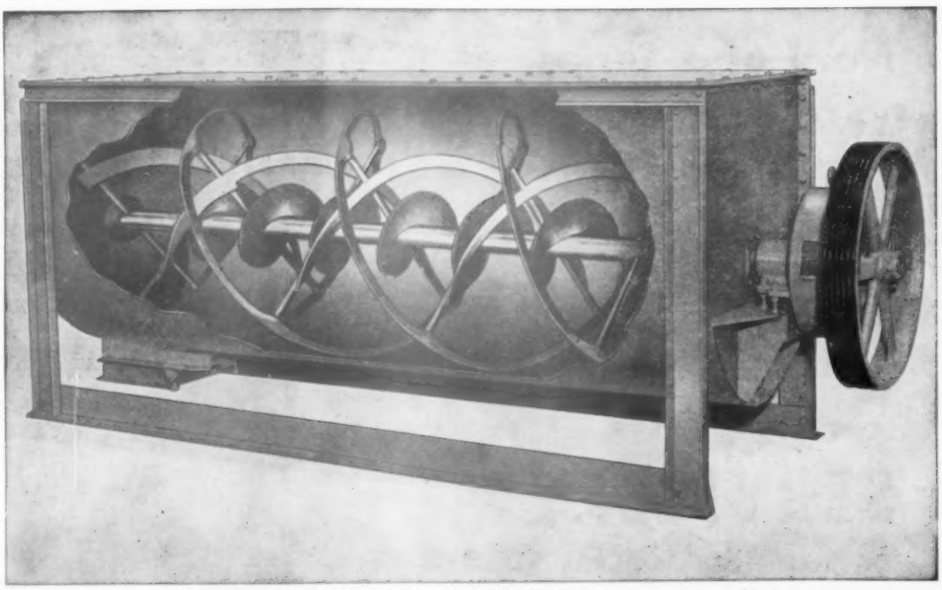
SUNSET FEED & GRAIN CO., INC.

PHONE CLEV. 2938 — 805 Dun Building Buffalo 2, N.Y. — TWX BU 71

FEED JOBBERS
AND
DISTRIBUTORS OF

KELLOGG HOMINY FEED — HUBINGER GLUTEN FEED
DYNAFOS DICALCIUM PHOSPHATE AND MULTIFOS
SODIUM BENTONITE
PACIFIC MOLASSES — PILOT OYSTER SHELLS
DU PONT'S "TWO-SIXTY-TWO" FEED COMPOUND
STONEMO GRANITE GRIT — CALF MANNA
NOPCO FEED SUPPLEMENTS
WHEAT GERM — WHEAT GERM OIL
AGRI-TECH ALFALFA PRODUCTS

INQUIRIES APPRECIATED



The New Strong-Scott Triple Action Mixer Showing Agitator Assembly

UNIFORM BLENDING AT HIGH CAPACITY IN 2 TO 7 MINUTES

Strong-Scott Triple Action Mixers Solve Mixing And Blending Problems

Now you can get a horizontal batch type mixer, with exclusive "Triple Action" mixing, created by the unique Strong-Scott triple ribbon and spiral assembly. This blending, folding and mixing action exposes each particle to thousands of separate mixing actions per minute, producing a well balanced, uniformly mixed product of the highest efficiency known.

THOROUGH MIXING — Complete mixing and blending in 2 to 7 minutes. Smooth interiors, without ridges or vanes, eliminate any gathering of materials and assure a thorough, sanitary, clean operation. Available in sizes of ½ to 6 ton capacities.

PRECISION ENGINEERING—The Strong-Scott Triple Action Mixer offers the ideal combination of modern engineering design, simplicity and overall ruggedness. The end bearings supporting the agitator assembly adjust vertically assuring an exact tolerance between the ribbons and the tub surface at all times. Built of heavy gauge steel, stainless steel or commercial alloys.

VERSATILITY—May be overhead or floor mounted. An overhead installation of a Triple Action Mixer may utilize the dual discharge arrangement. A reversing switch permits bulk discharge directly into a truck, or to the handy double sacker at the opposite end of the mixer, which can be located inside the plant. Consult Strong-Scott with any mixing, separating or grinding problem you may have. Let our production engineers provide your answer at no cost to you.

The Strong-Scott Pre-Mixers are also of the Triple Action agitator design. Normally supplied with a high leg mounting, they are engineered for initial preparation of feed supplements containing chemical ingredients, where a large mixer is not required. Available in 12, 15 and 18 cubic foot sizes.

The Strong Scott Mfg. Co.
Equipment Designed for Better Processing
451 TAFT STREET N.E., MINNEAPOLIS 13, MINNESOTA
DEPT. FS-419

CLIP AND MAIL TO
STRONG-SCOTT

☐ **Please Send Me the Bulletin on TRIPLE ACTION MIXERS**
☐ **I WOULD LIKE MORE INFORMATION ON THE CUSTOMER SERVICE LABORATORY**
☐ **I WOULD LIKE TO HAVE A STRONG-SCOTT REPRESENTATIVE CALL ON ME**

NAME .....
ADDRESS .....
CITY ..... ZONE ... STATE .....

Feed Mixers Products
COLBY
PULVERIZED
Oats or Barley
ROLLED OATS
AND
FEEDING OATMEAL
COLBY MILLING, INC.
COLBY, WISCONSIN
PHONE — TWX

What We Know About Bloat

● N. L. Jacobson and R. S. Allen, Dairy Husbandry Department, Iowa State College, Ames; Hoard's Dairyman, Vol. 103, No. 6, page 295 (March, 1958).

These Iowa researchers have presented an up-to-date review of our present knowledge of bloat in ruminants. The theories that have been proposed in an attempt to explain bloat are discussed. Several distinct types of bloat have been observed, and these are described. Information as to management helps and other methods of treatment is also presented.

COMMENTS:

This excellent review of the present status of our knowledge of bloat is most timely. The season of the production of lush pastures is starting, and the incidence of bloat on such pastures is still unfortunately high. This is especially true when pastures contain a fairly high level of legumes.

As these Iowa workers point out, "Despite many theories and treatments being advocated, more information is needed for effective control." Fortunately, the intensified research program on the prevention and control of bloat moves ahead, and results on the investigation of various phases of the problem are being reported regularly.

Bartley, at Kansas State College, has reported the results of some experimentation in which he found that "feeding linseed meal to cows before pasturing (on alfalfa) appeared to reduce the incidence of bloat and cause the bloat to subside more rapidly." Since one of the theories presented for the cause of bloat is that cattle grazing on legumes secrete saliva in reduced amounts, this researcher postulates that the "mucin in saliva or linseed could be responsible for the protective action of these materials."

Penicillin

The protective effect of the feeding of penicillin as an aid in the prevention of bloat in steers on pasture was first demonstrated by Ballentine and his co-workers at the Louisiana Station.

More recently, Emery, Smith and Huffman determined the practicability of the use of penicillin for the control of pasture bloat. These studies were made under average farm conditions in Michigan. The antibiotic was evaluated both in a grain mixture and in a carrier of trace-mineralized salt in these tests.

The Michigan research showed that the feeding of penicillin to dairy cows resulted in a slight reduction in milk production. However, it was found that the feeding of procaine penicillin at the rate of 50 milligrams per head per day was effective in reducing the incidence of bloat under Michigan pasture conditions. On the other hand, effective control was found to require a gradual increase to 100 milligrams of the antibiotic per head per day as the pasture season progressed.

Jacobson and Allen state that "certain legume proteins are being studied because of reports which suggest a possible involvement of these proteins in stable foam or froth formation."

California Report

One of the reports along this line has been presented by Boda from the University of California at Davis. He has presented data to the effect that the dehydrating of alfalfa greatly reduces the ability of this legume to produce bloat. "It is suggested that a partial explanation for this reduction of bloat associated with dehydration may be a denaturation of water-soluble plant protein."

Some research has been reported from New Zealand which would indicate that the incidence and severity of bloat is reduced when animals are fed wilted or partially dehydrated red clover in comparison to the freshly harvested legume.

Boda and his co-workers reported earlier that bloat could be produced by drenching animals that were being fed dehydrated alfalfa with fresh egg-white. This serves to bear out the theory that a water-soluble protein may be involved in the production of at least one form of bloat. Any process which would alter the nature of this protein could conceivably reduce or modify its ability to form bloat-producing gases in the stomach of the ruminant.

The effective prevention and control of bloat require a good deal more data and information than we have presently available to us. A great deal of extensive and intensive research is being conducted in different parts of this as well as foreign countries. The results of the work reported to date offer a good deal of promise for the solution of this problem. However a great deal of time may elapse before we have all of the answers.

No. 1 of a Series

THIS MAKES WIRTHMORE GREAT

SERVICE...

Nine mills strategically located to insure fast delivery of fresh feeds throughout our entire sales area.

SERVICE...

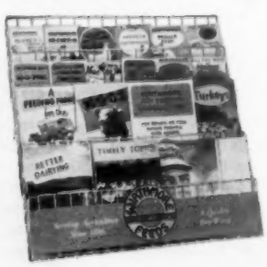
Over 1000 top-flight distributors set up to give their customers *what* they want, and *when* they want it.

SERVICE...

Experienced poultry, dairy and livestock specialists backing up the distributors, providing essential help to farmers on problems of feeding, housing, management, and disease prevention and control.

SERVICE...

A complete range of up-to-date booklets, folders and other literature provided to help the distributor know the feeds he sells and to help him to provide his customers with the information they need.



WIRTHMORE

WIRTHMORE POULTRY-DAIRY-STOCK FEEDS

Serving The Poultry And Livestock Industry Since 1886

Wirthmore Feeds Inc., Malden 48, Mass.

IT'S EASY TO SELL

Toxite®

... Because it's the BEST-KNOWN, ALL-PURPOSE FARM DISINFECTANT SPRAY

ANDERSON BOX COMPANY
Indianapolis 6, Indiana
MFD. BY TOXITE LABORATORIES, INC.

Use FEEDSTUFFS Want Ads for RESULTS

Benson Effort To Cut Grain Support Praised

PORTLAND, ORE. — The Oregon Poultry Council recently sent Ezra Taft Benson, secretary of agriculture, a telegram praising him for his attempt to lower future price supports on all grains.

The action was the result of a resolution passed during the group's annual meeting at the Congress Hotel, Portland.

At the meeting representative poultrymen, poultry processors, feed dealers and hatcherymen elected William Clark, Portland, president. He succeeds Lewis Clark, Eugene poultryman.

It was explained by Fred Cockell, Milwaukee hatcheryman, that the average Oregon farmer receives little benefit from current price supports and that Oregon poultrymen, dairymen and livestock feeders are penalized by higher feed prices as a direct result of support prices for wheat, corn and other grains.

In another resolution, aimed at helping raise more money to support the Poultry & Egg National Board, the council suggested that the national organization attempt to place a small tax on egg cartons.

Harry Rohe, Portland, Oregon Egg Producers manager, reelected secretary-treasurer, explained that although egg producers throughout the nation are not interested in any kind of a subsidy program, some of them would like to see some plan of voluntary production control.

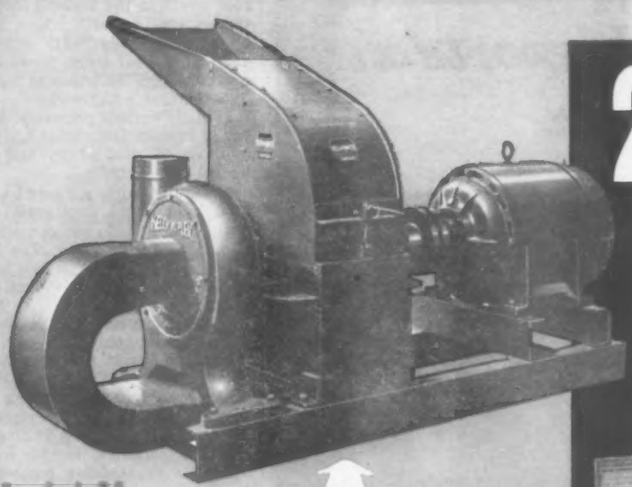
Other new officers named at the dinner meeting were Price Schroeder, Milwaukie, Hein's Turkey Hatchery, vice president; Lewis Clark; Carlos Johnson, Oregon City; Knute Hanson, Portland, and Del Stutzman, Aurora.

Hoffman

for complete nutritional service

Hoffman-Taff Inc.
SPRINGFIELD, MISSOURI

KEES & COMPANY
Processors of DRIED FISH SOLUBLE PRODUCTS
A "MUST" IN EVERY SWINE OR POULTRY RATION
Call or write for complete information and price
327 S. La Salle St., Chicago 4, Ill. Phone HArrison 7-1528

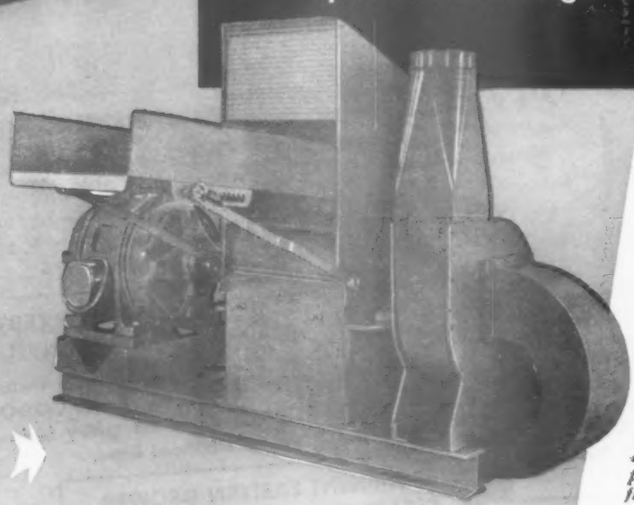


2 great KELLY DUPLEX HAMMERMILLS

backed by an ironclad performance guarantee *

Model M. . . A heavy duty, all-welded steel model designed for the 50 to 75 HP class. It gives you a grinding efficiency unsurpassed in the many competitive tests made . . . lower power consumption . . . steady, dependable performance . . . and long life. Screens can be changed quickly without raising mill cover. Other features include swing type hammers—large, rugged blower housing—special, oversized shaft and bearings—sturdy, one-piece alloy steel fan—oversize blower—and heavy steel mill body.

Model S. . . A larger, wide throat mill designed to meet requirements in the 75 to 125 HP class. Has all the same outstanding construction and performance features as the Model M, including the same unsurpassed grinding efficiency and lower power consumption. Both of these outstanding hammermills can be furnished with a direct connected motor with flexible coupling, mounted on an all steel base as one unit—or simply with a sheave for V-belt drive.



* We unconditionally guarantee that a Kelly Duplex Hammermill will grind more feed with the same power, conditions being equal, than any other hammermill on the market.

If you are not completely satisfied, you are free to return the machine within 30 days after arrival at destination, by prepaid freight, for refund of full purchase price.

Mail Coupon Today for complete information

THE DUPLEX MILL & MANUFACTURING CO., Springfield, Ohio

FIRST CLASS
Permit No. 72
(Sec. 34.9 P.L.&R.)
SPRINGFIELD, OHIO

BUSINESS REPLY ENVELOPE
(No postage necessary if mailed in the United States)

7c—POSTAGE WILL BE PAID BY—

THE DUPLEX MILL AND MANUFACTURING COMPANY
Springfield, Ohio

AIR MAIL

FOLD OVER ON THIS LINE . . . FASTEN (STAPLE, GLUE, TAPE)

THE DUPLEX MILL & MFG. CO.
SPRINGFIELD, OHIO

Yes, I'm interested in the KELLY DUPLEX machinery checked at the right. Please send me full information on these machines without any obligation.

Layout service and planning details available without cost.

- ☐ Model "S" Hammermill
- ☐ Vertical Screw Elevator
- ☐ Forced Air Carloader
- ☐ Chain Drag
- ☐ Corn Sheller with Blowers
- ☐ Pitless Corn Sheller
- ☐ Regular Corn Sheller
- ☐ Magnetic Separator
- ☐ Cob Crusher
- ☐ Corn Cutter and Grader
- ☐ Model "M" Hammermill
- ☐ Vertical Feed Mixer
- ☐ Twin Molasses Mixer
- ☐ Electric Truck Hoist
- ☐ Corn Crusher—Regulator
- ☐ Grain Blower
- ☐ Corn Sculper
- ☐ Attrition Mill
- ☐ Grain Feeder
- ☐ Electric Bag Cleaner
- ☐ Complete Line Catalog

NAME _____

TITLE _____

FIRM _____ PHONE _____

CITY _____ STATE _____

Feed Financing Today and Tomorrow

"If we want to be bankers, we should do as bankers do. This would probably slow us down a bit, but it would, I think, decrease our digestive disturbances, alleviate growing pains, and make for sounder advancement and growth all along the line."

By Oscar Straube
Pay Way Feed Mills

EDITOR'S NOTE: It would be better to turn financing over to local bankers, but if feed men are going to finance, they should be sure that all of the costs of providing credit are covered. Feed men also should be thinking of the future, when units will be larger and demand for credit will be still greater, with costs higher. This was some of the advice offered recently by Oscar Straube in a talk on feed financing at the Midwest Feed Manufacturers Assn. convention in Kansas City. Mr. Straube is president of Pay Way Feed Mills, Kansas City, and is chairman of the board of the American Feed Manufacturers Assn. The accompanying article is from his talk at the Midwest convention.

One hundred seventy million Americans are hungry. What's more, they are hungry three times a day. This means about 500 million meals must be served on each and every day.

One good thing about this tremendous need to eat is that most of these Americans can buy their preference of food to assuage these ravenous appetites. This observation has been proved by what has happened to the broiler demand in recent years. During 1956, 1.3 billion were produced and sold. In 1946, ten short years before, only 300 million were produced and sold.

While this rapid expansion in production was made possible to a great degree by the use of credit—some of it extended wisely and some extended unwisely—new techniques and new feeds also have played an important part in bringing about this upsurge in the economical production of the delectable broiler of today.

Cost Reduced

These new techniques have helped to reduce the cost of producing a broiler profitably to about two-thirds of what that cost was a few short years ago. Today a broiler can be produced at 17 to 18¢ lb. in most localities on contract growing plans, whereas the cost was around 25¢ lb. Since most broilers average 3 lb. alive at market time, this represents a saving of about 25¢ per broiler to the ultimate purchaser and cuts a very nice swath in the over-all food bill of the nation—a swath which amounts to approximately $300 million per year. This great stride forward shows what benefits an industry can bring to consumers with the close collaboration of its various segments, with the use of modern techniques and modern methods of production, and with a liberal use of credit.

Naturally, such a spectacular growth and such substantial savings could not be made without some hard bumps along the way. The government in Washington is now being requested by some of the less efficient producers to keep them in business with a guaranteed price or some type of production control. If such regulations or controls had been in effect during the past 10 years, the consumer would not be getting such a splendid bargain in the delicious and delectable broiler he is buying today, and the industry would not have made its spectacular progress with tremendous benefits to many borderline farming areas.

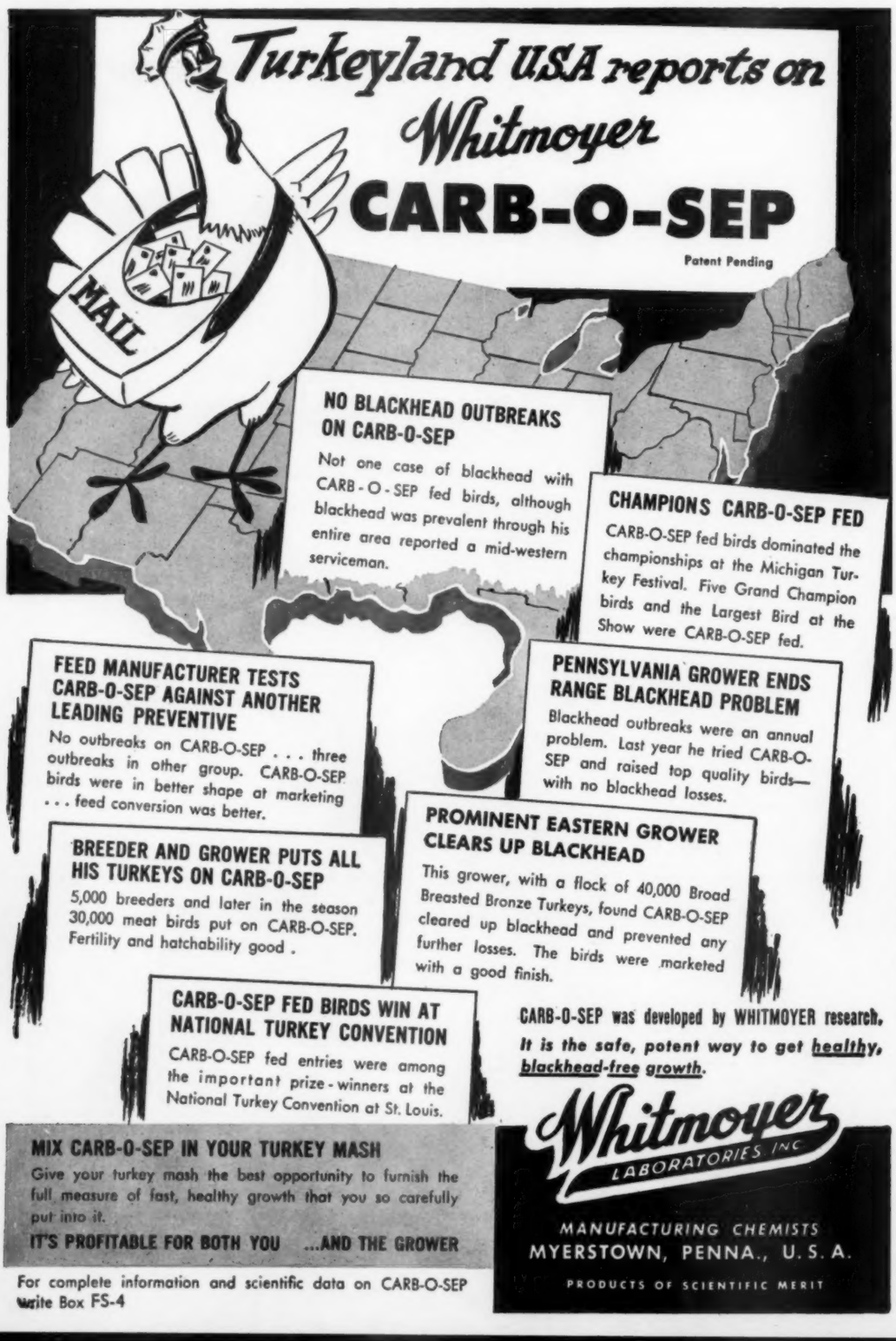
Controls Unwanted

That government action is not considered necessary was brought out in discussions with some 50 people in attendance at the Poultry Fact Finding Conference in Kansas City recently. Not a single solitary individual indicated a desire to have government controls in the broiler industry or in any other part of the poultry industry.

Some, however, were quite outspoken in stating their opinions that the six or seven government agencies which are now involved in loaning money to producers should withdraw the preferential loan policies which aid certain groups and certain areas to the detriment of others. They felt this unfair competition should be eliminated. They felt that the money required for the advancement of the broiler and poultry industries should be furnished by banks and individual concerns interested in the industry itself.

The feed industry led the way in building and developing a program for the successful rearing of quality broilers on a low-cost basis.

Behind that program and responsible for a good part of its success lies the tremendous amount of credit originally extended by the feed indus-


Turkeyland USA reports on
Whitmoyer
CARB-O-SEP
Patent Pending
MAIL
NO BLACKHEAD OUTBREAKS ON CARB-O-SEP
Not one case of blackhead with CARB-O-SEP fed birds, although blackhead was prevalent through his entire area reported a mid-western serviceman.
CHAMPIONS CARB-O-SEP FED
CARB-O-SEP fed birds dominated the championships at the Michigan Turkey Festival. Five Grand Champion birds and the Largest Bird at the Show were CARB-O-SEP fed.
FEED MANUFACTURER TESTS CARB-O-SEP AGAINST ANOTHER LEADING PREVENTIVE
No outbreaks on CARB-O-SEP . . . three outbreaks in other group. CARB-O-SEP birds were in better shape at marketing . . . feed conversion was better.
PENNSYLVANIA GROWER ENDS RANGE BLACKHEAD PROBLEM
Blackhead outbreaks were an annual problem. Last year he tried CARB-O-SEP and raised top quality birds—with no blackhead losses.
BREEDER AND GROWER PUTS ALL HIS TURKEYS ON CARB-O-SEP
5,000 breeders and later in the season 30,000 meat birds put on CARB-O-SEP. Fertility and hatchability good.
PROMINENT EASTERN GROWER CLEARS UP BLACKHEAD
This grower, with a flock of 40,000 Broad Breasted Bronze Turkeys, found CARB-O-SEP cleared up blackhead and prevented any further losses. The birds were marketed with a good finish.
CARB-O-SEP FED BIRDS WIN AT NATIONAL TURKEY CONVENTION
CARB-O-SEP fed entries were among the important prize-winners at the National Turkey Convention at St. Louis.
CARB-O-SEP was developed by WHITMOYER research.
It is the safe, potent way to get healthy, blackhead-free growth.
MIX CARB-O-SEP IN YOUR TURKEY MASH
Give your turkey mash the best opportunity to furnish the full measure of fast, healthy growth that you so carefully put into it.
IT'S PROFITABLE FOR BOTH YOU ...AND THE GROWER
Whitmoyer LABORATORIES INC
MANUFACTURING CHEMISTS
MYERSTOWN, PENNA., U.S.A.
PRODUCTS OF SCIENTIFIC MERIT
For complete information and scientific data on CARB-O-SEP write Box FS-4

Make Your Customers
GOOD Customers . . . all year 'round
SUPREME Brand
Condensed BUTTERMILK
HERBERT K. CLOFINE, Inc.
MILK PRODUCTS
215 South Smedley St. Phila. 3, Pa.

Oscar Straube

try during this building process. It is interesting to note that this has now changed materially. About 90% of the broilers produced last year were produced on a contract basis, and contract growing is not a credit way of doing business. The contractor maintains strict control over the birds, has direct ownership, has a voice in the management and generally all the voice in the disposition of the birds and getting the money at the time the birds move to market. The grower is usually paid on a flat fee basis of so much a bird. Title does not pass to him and he assumes none of the financial risk.

New Entrepreneurs

While feed men furnished the early credit and took the early risks, we observe today that a good portion of the new business developed is in the hands of new entrepreneurs who are broiler men, not feed men. Feed is only one of the many activities required in the broiler raising process. Some of the others are: Breeding stock for chick producing; hatching and handling of chicks; the management of the growing operation; feeding; processing and selling the end products.

Even so, whoever is growing broilers, on contract or otherwise, does have the need for money, and most of these obtain their money direct from the banks on some plan, depending on their operation. This is as it should be, for the feed industry does not have the money to finance these many varied projects. The trouble with us in the feed industry is that we get our sales mixed up with our dollars and let our emotions prevail over our common sense. Then we find ourselves in the position of putting out feed credit so fast that we and our dealers get indigestion and have considerable difficulty trying to get straightened out.

If we want to be bankers and advance money for these different operations, which, I may say, applies not only to broilers, but applies also to a certain extent to egg production, to hog and beef producers, and turkey raisers, too, we should do as the bankers do. This probably would slow us down a bit, but it would, I think, decrease the digestive disturbances, alleviate the growing pains and make for a sounder advancement and growth all along the line. The banker takes sound financial risks and most generally gets collateral security. The banker is very definite and positive about arranging repayment plans, for he knows full well in handling dollars that it is not what is said that matters, it is what actually happens.

Costs of Financing

If we are going to finance, we must remember first of all, that there are many costs other than interest which must be taken into consideration. When we finance feed at 6% per annum without giving consideration to these added costs, we are only fooling ourselves. We have to give too much service and we have too many things to do which are not in our reg-

ANIMAL FAT IN DRY FORM FOR YOUR FEED MIXING

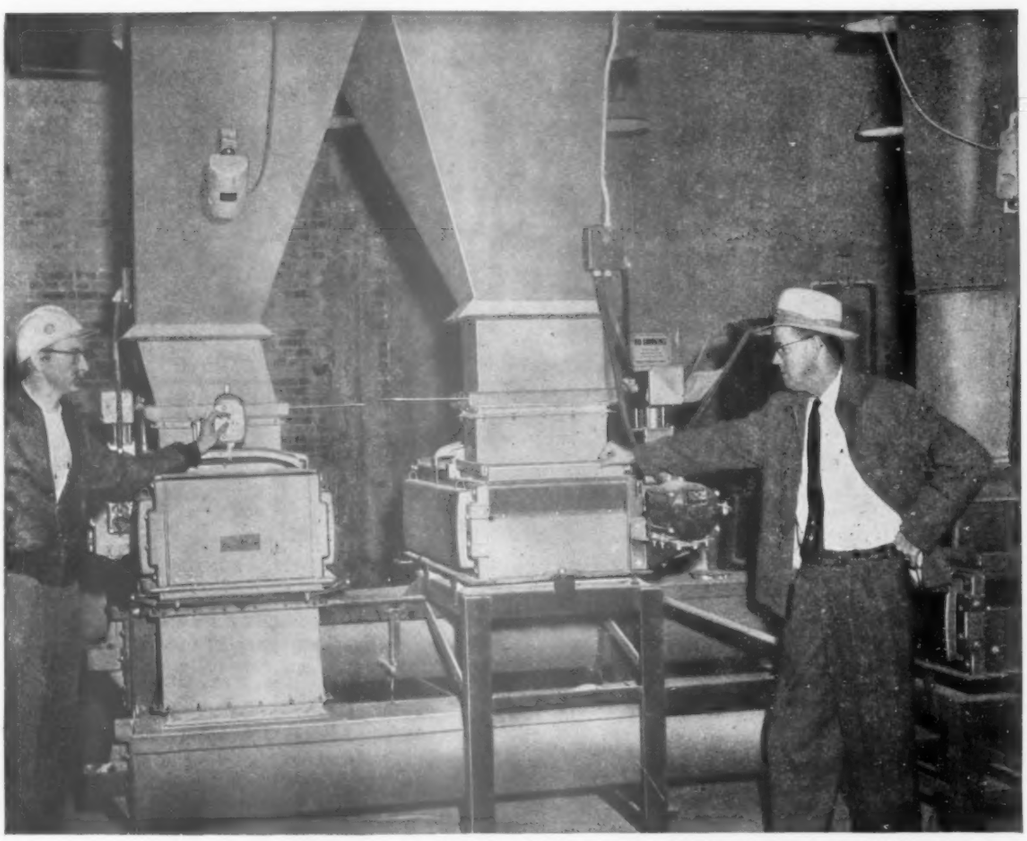
HOMINY FEED • KIBBLED CORN

STANDARD *Fat Enriched* INGREDIENTS

MIDDS • SOYBEAN MEAL

Your formulas can now include stabilized animal fats. STANDARD *Fat-Enriched* Ingredients are a scientific blend of high quality animal fats on a dry carrier with a safe, proved anti-oxidant which stabilizes fat and protects fat-soluble vitamins in the feed.
They are economical, too, as expensive handling of liquid tallow and grease is avoided. Both packed in 100 lb. burlap bags for prompt shipment, in carlots, truck lots or split cars. Write or phone STANDARD for today's prices and samples.

STANDARD FEED & FERTILIZER, INC.
Affiliate of Milbrew Inc
3456 North Buffum St., Milwaukee 12, Wisconsin EDgewood 2-6204



Merchen Scale Feeders blending salt and trace minerals at Carey Salt Co., Hutchinson, Kans.

MERCHEN SCALE FEEDERS

offer continuous dry blending by weight

The Carey Salt Company produces salt blocks for cattle that contain a percent blend by weight of nutritional minerals. W&T Merchen Scale Feeders were selected for the blending operation.

If accurate blending of dry, free flowing materials is important to your production, Merchen Scale Feeders offer feed rates from 3 ounces to 3000 pounds per minute, always maintaining accuracy within 1% of the feed rate. The feeders compensate for changes in material density to maintain a constant feed by weight.

Where a number of ingredients must be blended, Merchen Feeders can be electrically or pneumatically controlled from other plant equipment for automatic operation. Send for our booklet M-37, "The Best Weigh is the Merchen Way."

WALLACE & TIERNAN INCORPORATED
25 MAIN STREET, BELLEVILLE 9, NEW JERSEY

SNOW WHITE

OYSTER SHELL

• Steady Profits
• Highest Quality
• Best Service

White Shell
CORPORATION
Jacksonville, Florida

Distributed by
EDWARD R. BACON GRAIN CO.
177 Milk St. Boston 9, Mass.

LA BUDDE
MILWAUKEE, WIS.
MALT SPROUTS
BREWERS GRAINS
DISTILLERS GRAINS
BEET PULP
AND 44 OTHER FEEDS

NORTH EAST
Feed Mill Company
MINNEAPOLIS 13, MINNESOTA
FEED INGREDIENTS OF ALL KINDS

A. E. BAXTER ENGINEERING CO.
Designers and Engineers for Mills, Elevators and Feed Mills
1311-1315 GENESEE BUILDING BUFFALO 2, NEW YORK

ular line of business to enable us to operate on any such basis.

It is much better for us to operate on a flat service charge basis—$1.50 to $2.50 per ton depending on the kind of feed, its price, the over-all contract time and other conditions with which you are familiar. We need this to pay for the cost of references and investigations, the cost of handling the contract itself within our organization, the cost of collecting the contract and also for the building of a reserve to protect us against the losses which we know we are going to have.

By and large, we should learn from the automobile and appliance dealers who have found themselves in our same position and who have been forced into the financing business. What they have done is to change the financing into a profitable adjunct to their business by giving proper thought to these extra activities and their costs. That certainly is the thing we should do if we are not going to turn the financing over to local bankers, where it belongs.

A hardware dealer reports in one of his trade magazines that about 20 to 25% of his firm's income was derived from carrying charges on credit sales. We do not believe that any such percentage would be advisable in the feed business, but we do believe that some program should be developed by each manufacturer so that his financing operations will at least return his full costs and not be a burden on him and a disadvantage to his cash buyers.

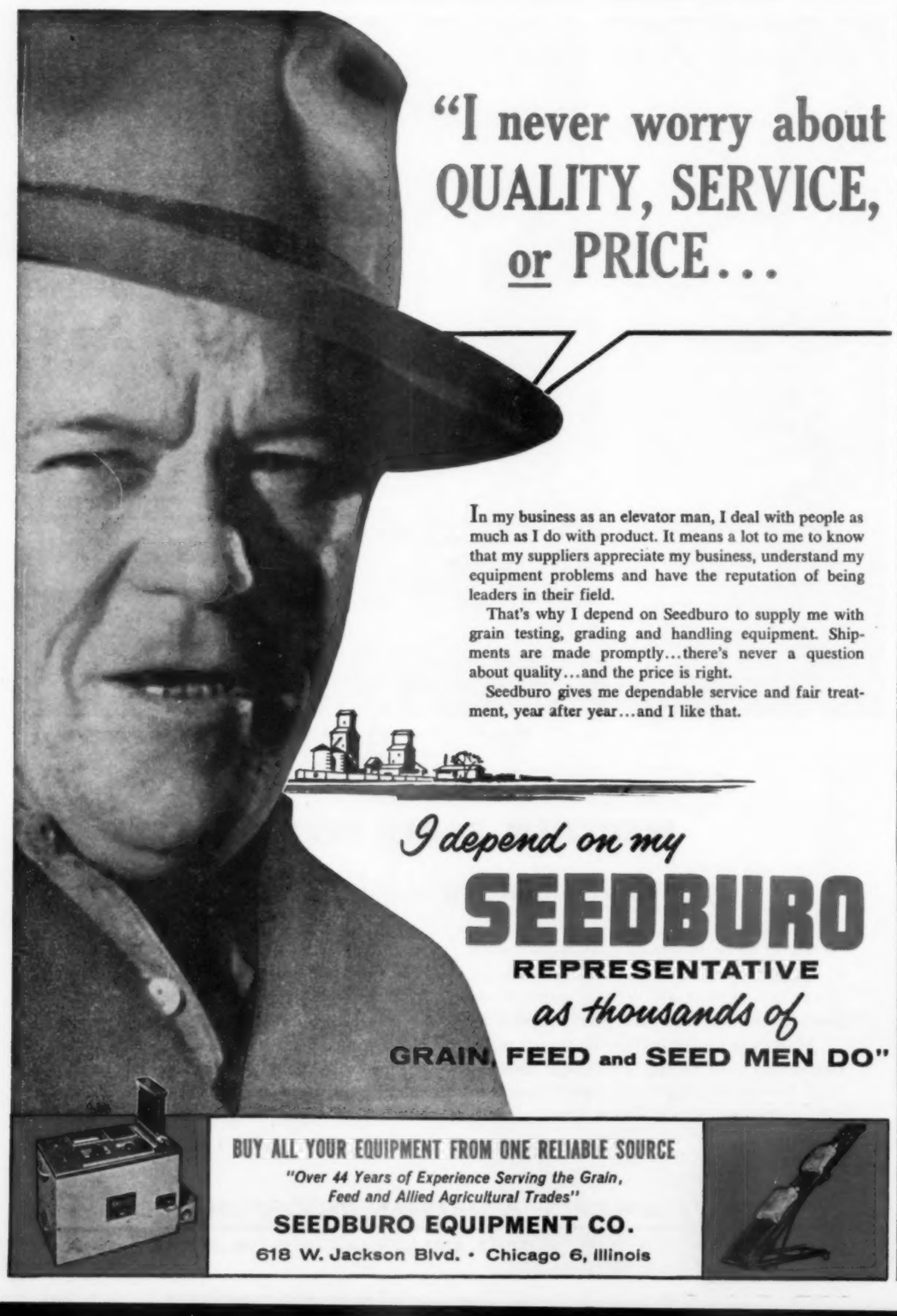
What About Tomorrow?

It is well for us to consider very sincerely what this financing demand will hold for us in the future. There is no question that farms are getting larger and that the demands for money are going to increase, too, because as capital requirements become greater with the increase in the size of livestock and poultry production units, we can see that there will be greater demands on us for credit. It behooves us to prepare ourselves and have a good plan to help the producers in our area. That good plan may best be developed by our going to our banker, having a heart-to-heart talk with him and finding out just what he considers the safe and sane way to approach this problem.

As farming becomes less a way of

Bernard F. Nachtman

DISTRICT MANAGER—Bernard F. Nachtman has been named manager of the Chicago district office for Commercial Solvents Corp., it was announced by James V. O'Leary, general sales manager. Mr. Nachtman joined CSC in May, 1947, as an industrial chemicals salesman assigned to Kansas City. In October, 1951, he became manager of the Cleveland district office, a post he held at the time of his new appointment. The Chicago district office serves as the sales center for CSC products in an area covering northern Indiana and Illinois, Wisconsin, Iowa, Minnesota and the Dakotas.


"I never worry about QUALITY, SERVICE, or PRICE...
In my business as an elevator man, I deal with people as much as I do with product. It means a lot to me to know that my suppliers appreciate my business, understand my equipment problems and have the reputation of being leaders in their field.
That's why I depend on Seedburo to supply me with grain testing, grading and handling equipment. Shipments are made promptly...there's never a question about quality...and the price is right.
Seedburo gives me dependable service and fair treatment, year after year...and I like that.
I depend on my
SEEDBURO
REPRESENTATIVE
as thousands of
GRAIN, FEED and SEED MEN DO"
BUY ALL YOUR EQUIPMENT FROM ONE RELIABLE SOURCE
"Over 44 Years of Experience Serving the Grain, Feed and Allied Agricultural Trades"
SEEDBURO EQUIPMENT CO.
618 W. Jackson Blvd. • Chicago 6, Illinois

McCabe Grain Company Limited
WINNIPEG-VANCOUVER
LONDON, ENGLAND
Schwartz & Co.,(Grain) Ltd.
Victoria Products and Grain (oversaas agents) Ltd.

life and more a business, we will find that a definite part of our obligation to our feeders is to help them in their over-all finance planning. There are many people who are well deserving who do not have the financing necessary to meet this new challenge. Credit will help these men to develop and build a sound feeding operation during this rapid changeover we are all facing.

Stop and Think

But stop and think. Should you alone, as a feed manufacturer, bear the risk of the success or failure of this under-financed feeder when you furnish only a part of his required services? Perhaps you are several hundred miles away from the operation. You do not know him personally. You do not have the advantage of close knowledge of his manner and method of doing business, and, therefore, cannot offer him the advice and counsel he can obtain from his local banker who knows and understands his problems and who does have an acquaintance with him personally.

Since these units are going to get larger and purchases will be made in greater quantities, we know that our margins are going to shrink and that the cost and risk of handling all classes of livestock and poultry credit will increase. So perhaps we should stop and think a moment and do as one of our dealers suggested to me when we had a loss in his area—"Be a little less loose, goose."

Long Life for Midwest Family Farm Predicted

AMES, IOWA—The family farm is going to continue as the main farming unit in the Midwest, but it'll be a bigger unit, says Earl Heady, production economist at Iowa State College.

Mr. Heady says economics research shows types of changes that are going on in Iowa tend to strengthen the position of the family farm—for families that remain on the farm. In fact, the percentage of corporation farms in Iowa has been decreasing. It's down to 0.2% of the total now, he said.

Modern machinery, Mr. Heady pointed out, generally means that a family will have enough labor to operate a bigger farm than it did in the past.

Where 160 acres once used the full labor capacity of a farm family, the researchers find the maximum efficiency for use of land, labor, machinery and other capital is achieved at around 240 acres now. Where crop yields are lower, and where much of the land is in permanent pasture, the family-operated farm is often most efficient when it has much larger acreages, he said.

But research results at the college indicate that favorable earnings are possible for family farms operated with enough capital and on a sufficient scale in the Midwest.

A shift away from family farms seen in some areas doesn't seem to be "in the cards" for the Midwest, he said. And such a shift is not a necessary result of farm size adjustment.

The forces which are causing shifts in the size of farms in Iowa and the Midwest include the production inequalities which resulted from pioneer layouts of farms with equal acreage but not necessarily equal production capacity, the "pushing force" of new technology which allows one family to operate more acres, and the "pulling force" of full employment and high wages in nonfarm industries which are attracting farm people to other jobs.

HONEGGER LEGHORNS
A natural profit-maker with plenty of follow-up poultry feed sales. An exclusive with HONEGGER DEALERS.

BIG "H" FEEDS
Are tested and proved at Honeggers' 600 Acre Practical Test Farm. The superior results of Big "H" Feeds mean repeat orders and repeat profits.

FARM BUILDINGS
Honeggers' complete line of competitively priced, pre-built farm buildings are an extra "exclusive" profit plus for Honegger Dealers.

EQUIPMENT
Honegger Dealers can have equipment shipped prepaid with their cars of feed. Honeggers' full line of modern labor-saving equipment makes an excellent "door opener" for extra feed sales.

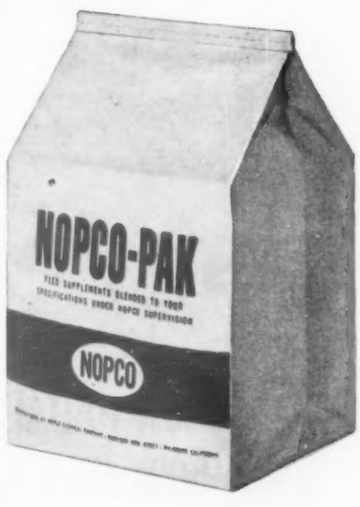
For Full Details Write or Phone Collect TODAY!

HONEGGERS'
FAIRBURY, ILLINOIS

Announcement to our Nopco-Pak Customers

twice as effective 2 twice as effective

NOPCAY® TYPE V IS NOW USED IN ALL NOPCO-PAK® FORMULAS



This is good news, important news, for all of you who have had a chance to study the advantages of using this remarkable new vitamin A in your feed supplement.

Nopcay Type V, a new Micratized® Vitamin A, is twice as effective as oil forms of vitamin A, whether natural or synthetic.

twice as effective 2 twice as effective

Nopcay Type V remains stable because it is Micratized, whereas other forms of vitamin A may rapidly deteriorate. The combined effect of increased stability and biological effectiveness can result in a total biological response with Nopcay Type V which is 3 or 4 times as great as that obtained from other forms.

Nopcay Type V is a development of great importance for the whole feed industry and one more convincing reason why Nopco-Paks are your best buy.

NOPCO CHEMICAL COMPANY NOPCO
Harrison, N.J., and Richmond, Calif.

Basic producers of Micratized® Vitamins A and D, niacin, calcium pantothenate, choline chloride, and other products

UP OR DOWN?

By Leonard W. Schruben

Agricultural Economist, Kansas State College

Egg-Feed Prices and Poultry Production

Profits from egg production do not depend upon the level of egg prices alone but also upon the relation between the price of eggs and the price of feed. The egg-feed ratio will help you picture this relationship.

The relationships between egg prices and feed prices seem to work in two-year cycles. First, they are up, next they are down. You will notice how consistent these ups and downs have been from year to year by examining Exhibit 1, which was supplied by the USDA.

Data in the chart are from 1945. Only twice during the period did a trend continue for two years in a row. This was immediately after World War II. In the last three years the ratio has averaged fairly steady but with some ups and downs during the season.

Prices in the latter part of 1957 were relatively favorable. In December, 1957, a dozen eggs would buy about 13.4 lb. of poultry ration—this is on a national average basis. This compares with 9.3 in January, 1957. Both months are shown on Exhibit 1 with a dot to picture the change that has taken place as a result of declining feed prices for one thing.

It is fairly easy to understand the reason for fluctuating production. Favorable price ratios the past few months may lead farmers to expand laying flocks this coming year. While lower egg prices may be in prospect for the fall and winter of 1958, an expansion of poultry feed sales can be expected this spring and summer.

The large feed grain crops of 1957 continue to exert downward pressure on feed prices. This pressure is likely to continue until the wet corn and grain sorghum crops are disposed of. If past patterns are followed, flock size will be increased in the fall of 1958. Egg-feed price ratios may not be as favorable this fall if a normal or lower yield of feed grains is realized. This factor may retard sales of laying feed—or perhaps the collection of accounts receivable.

Clearly the trend is to use feeds more efficiently. As you can see from Exhibit 2, remarkable changes in technology have occurred. In the past few years the number of laying hens has been far below the level of the 1940's, but production has been near record levels. The increased production per 100 lb. of feed that has taken place in broiler production has provided a foundation for the expansion in that industry. The commercial feed industry can be proud of the part it has played in bringing to farmers the results of new discoveries.

Are you providing your customers with feeds that will permit them to keep up with improved methods? You cannot afford to drift and expect to make the most profit from your feed business.

EXHIBIT 1. Egg-feed price ratio, 1945-57.

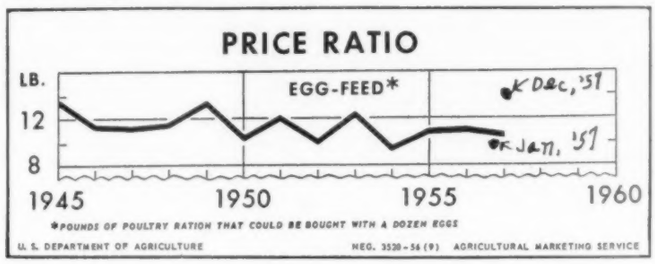
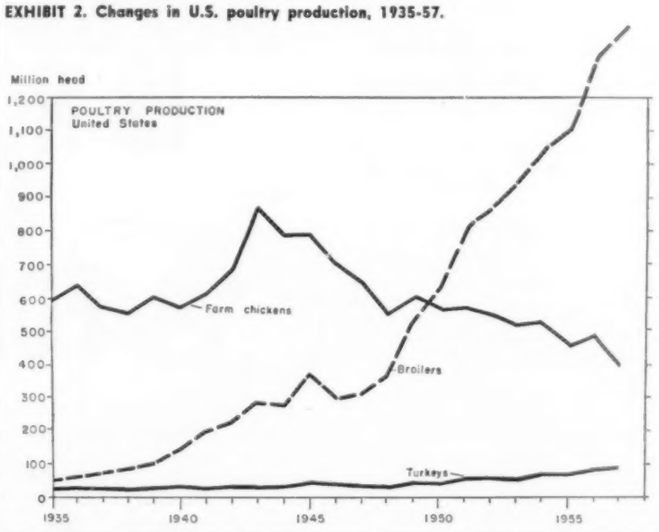
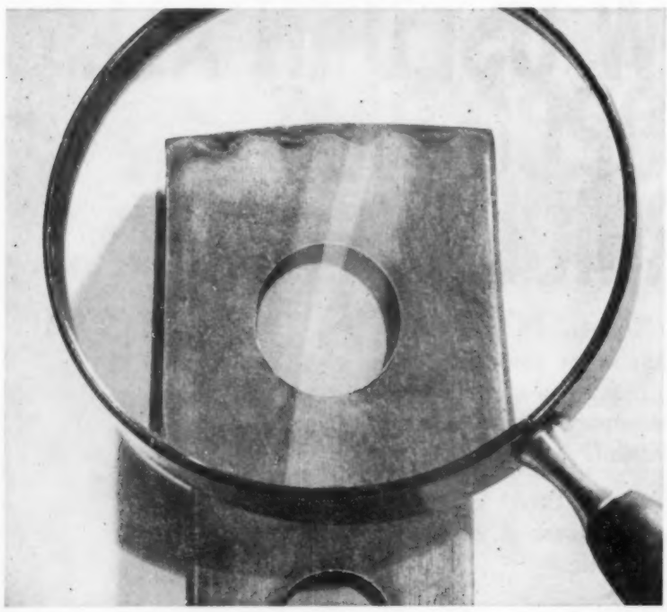


EXHIBIT 2. Changes in U.S. poultry production, 1935-57.



PACAL



New PACAL HAMMER
holds 50% more tungsten-carbide

Cut your grinding costs with new PACAL Hammers. Serrated-Head* design holds 50% more tungsten-carbide than conventional hammers. PACAL Hammers sharpen as they wear, hold their edge, cut cleaner. Last 25% longer than ordinary hard-faced hammers. You get more hours of quality grinding. You save on replacement costs.

There's a PACAL Hammer for your product and your hammermill. Call or write the Hammer Division.

*PATENT APPLIED FOR

P&C PAPER, CALMENSON & CO.
County Road B & Walnut St., St. Paul 13, Minnesota
Telephone: Midway 6-9456

HAMMERS

Larger Profits for
Dealers And Growers
With Hard, Sparkling

SUPREME RI-STONE SHARP-INSOLUBLE

GRANITE GRIT

The demand for Sparkling Ri-Stone Granite Grit is growing by leaps and bounds. Sales are more than double that of last year. Poultry Raisers find Ri-Stone's harder, sharper grinding edges enable them to get faster growth and more and larger eggs at lower costs. Every month more raisers are learning about Ri-Stone through its regular advertising in poultry publications reaching approximately a million operators per month.

Yes, Ri-Stone means added profits to both feed dealers and poultry raisers. Your inquiry is invited. Write for copy of Poultry Grit Facts.

Get Ri-Stone in the economical 80 lb. bags. A size for all ages. Fine, Medium, Coarse and Turkey sizes.

Fine Aggregate Division
RION CRUSH STONE CORP., Rion, S. C.
QUARRIERS OF GRANITE FOR OVER 70 YEARS.

ADVERTISEMENT — This is a paid advertisement

Prepared by U. S. Industrial Chemicals Co.

U.S.I. FEED NEWS®

Vol. V ★ A SERIES FOR SCIENTISTS AND EXECUTIVES OF THE FEED MANUFACTURING INDUSTRY ★ No. 4

Vitamin B_{12} in Ration Improves Iodine Uptake

Recent studies with poultry show that adequate iodine uptake by the thyroid glands requires vitamin B_{12}. This condition was shown by comparing birds raised on a diet lacking vitamin B_{12} with birds fed a practical ration for 4 months. When eggs from B_{12} deficient birds were incubated, uptake of iodine by the thyroid glands was low, both in embryos and in chicks. Adding vitamin B_{12} to the ration for one month increased iodine uptake greatly, as did injections of vitamin B_{12} for 5 days. Thyroids of deficient hens and embryos were low in sulfhydryl compounds, indicating importance of sulfur-containing amino acids such as methionine in metabolism.

Turkey Poults Show High Vitamin K Need

Studies comparing vitamin K requirements of turkey poults and chicks showed that the poults require more vitamin K than previously thought necessary. Water-soluble menadione sodium bisulfite complex was an excellent source of vitamin K in feed for poults. As a curative dose, both water-soluble and fat-soluble sources of menadione (vitamin K_3) are highly efficient.

Pays to Assure Enough Vitamin E for Poultry

In recent research, vitamin E in alfalfa leaf meal proved to be only 34% available to chicks, when compared to synthetic *dl*-alpha-tocopheryl acetate. Synthetic *d*-alpha-tocopherol showed an even higher efficiency than the synthetic *dl* form. This indicates that it pays to assure enough vitamin E in feeds.

Proper Balance of Amino Acids Vital in High-Energy, High-Protein Feeds

The economic pressure for greater efficiency in poultry and livestock feeding produces constant efforts to concentrate feeds and to use low-cost ingredients. This requires accurate balance of nutrients in every ration. This vital balance is made easier by addition of certain amino acids.

Methionine is the most critical amino acid in most rations. The exceptional values of methionine supplements have been well proven for poultry and other animals, including dogs and mink.

Methionine Pays Off

Supplemental methionine closes the gap in amino acid balance in low-cost vegetable proteins such as soybean meal. Even with high-quality protein such as fish meal, additional methionine has for some reason consistently improved growth, feathering and poultry feed efficiency.

In high-fat, high-energy rations, the ratio of protein to energy can be reduced profitably by adding methionine. In chick starter rations, a ratio of 2.31 grams of methionine per therm of productive energy has been cited most efficient. Addition of methionine to feed is reported to prevent cannibalism.

Methionine is valuable in improving liver function, helps hormone action and blood clotting. It helps animals increase synthesis of vitaman B_{12}, choline and thiamine, and spares pantothenic acid. For ruminants, methionine improves nitrogen retention and aids absorption of carotene.

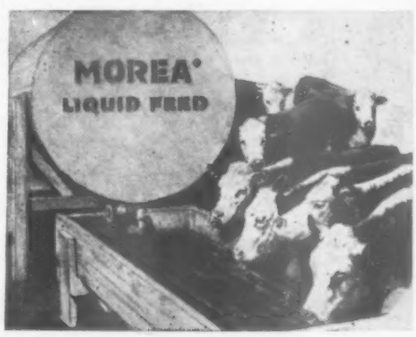
Offsets Stress Problems

Methionine helps overcome many stress factors, including temperature changes, vaccination, coccidiostats and other drugs. It helps prevent growth depression due to antitrypsin in poorly heated soybean meal, tissue injury, coprophagy and toxifying agents such as tetanus. Methionine also helps growth when fed with antibiotics.

For more information on methods of assuring adequate methionine levels in feeds, write U.S.I.

Protein Level of 12-13% Best for Ruminant Feed

Recent feeding tests with lambs showed that cellulose did not affect protein digestibility, but that protein level had an important effect on digestibility of all nutrients in the ration. When protein was varied to provide several levels of dietary nitrogen, the digestibility of the ration was best with 2.05% nitrogen. This indicates that about 12.8% total protein for ruminants provides most efficient feed use.



Cattle and lambs on free-choice MOREA® Liquid Feed balance their own ration at about 12.5% protein intake. Animals on this liquid feed program produce high-grade carcasses with well-marbled meat and less wasty cover fat. U.S.I. is now appointing mixer-distributors to make and sell MOREA Liquid Feed.

FEED PRODUCTS OF U.S.I.

- U.S.I. ANTIBIOTIC FEED SUPPLEMENTS (bacitracin and procaine penicillin)
- U.S.I. VITAMIN B_{12} SUPPLEMENTS
- U.S.I. MENADIONE PRODUCTS (vitamin K_3)
- U.S.I. BHT PRODUCTS
- U.S.I. CUSTOM MIXES
- U.S.I. RIBOFLAVIN PRODUCTS
- U.S.I. CHOLINE CHLORIDE (25% dry or 70% solution)
- MOREA® PREMIX
- U.S.I. CALCIUM PANTOTHENATE Products
- U.S.I. DL-METHIONINE (feed grade)
- U.S.I. PERMADRY (sealed-in vitamin A)
- U.S.I. VITAMIN D_3 (stabilized)
- U.S.I. NIACIN
- U.S.I. VITAMIN E PRODUCTS

BRANCHES IN PRINCIPAL CITIES

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corporation

99 PARK AVE.
NEW YORK 16, N. Y.

Amino Acid Story With Swine

By Dr. D. E. Becker
University of Illinois

Perhaps no class of nutrients is more important and critical in swine feeding than proteins or, rather, their components, amino acids. Some 22 amino acids have been recognized in animal feeds; however, only 10 of these are considered essential for proper nutrition of swine. Arginine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine are the essential amino acids, cystine and tyrosine can partially satisfy the need for methionine and phenylalanine, respectively.

Inadequacy of Protein Feeding Standards: Since proteins are the practical source of dietary amino acids, swine nutritionists have indirectly fulfilled the amino acid needs of swine by adhering to protein feeding standards. For instance, according to the National Research Council, the 25-lb. growing pig requires a diet containing 18% protein for adequate nutrition.

However, it has been demonstrated repeatedly that various diets containing 18% protein are inadequate for proper amino acid nutrition of the weanling pig. On the other hand, certain diets containing only 12% protein, but properly balanced in amino acids, have been observed to support normal performance in growing pigs.

Amino Acid Needs of the Growing Pig: A number of feeding trials on amino acid needs of the pig have been conducted by workers at Cornell, Illinois and Purdue. As a result, practically all of the essential amino acids have been studied with the weanling pig. But the individual amino acid requirements have been studied at a very limited number of protein levels, and it is becoming increasingly clear that amino acid needs at one level of dietary protein do not apply to all levels of protein.

Previous attempts to summarize amino acid needs of swine at a range of protein levels have assumed that the need is a constant percentage of the dietary protein. However, there is a substantial amount of data in work with the pig and chick to verify the principle that the required percentage of certain indispensable amino acids in the protein decreases in a fairly direct fashion as the protein level increases. On the basis of this relationship, the amino acid needs of the growing pig were calculated, and they are presented in Table 1.

EDITOR'S NOTE: Efforts to determine amino acid needs of the growing pig in the past have assumed the needs are a constant percentage of the dietary protein. But there are growing amounts of data which indicate that the required percentage of certain indispensable amino acids in the protein decreases in a fairly direct fashion as the protein level increases, according to Dr. D. E. Becker, department of animal science at the University of Illinois. The accompanying article is an abstract of a talk by Dr. Becker at the Illinois Feed and Nutrition Conference.

Amino Acids of Practical Importance: Since yellow corn is a basic ingredient of swine diets, it usually supplies a considerable portion of the amino acids. However, relative to the total need, corn is deficient in all of the essential amino acids except arginine and leucine. Histidine, valine, and phenylalanine are only slightly deficient in corn and they are ordinarily supplied in plentiful amounts by the supplementary proteins. The levels of isoleucine, lysine, methionine, threonine, and tryptophan may be inadequate, and they justify careful consideration.

TABLE 1. Calculated Amino Acid Needs of the Weanling Pig Fed at Various Protein Levels (Per Cent of the Diet)

Amino acid	—Calculated need at dietary—protein levels of* 12%	15%	18%	21%	24%
Arginine	0.21	0.25	0.28	0.30	0.32
Histidine	0.18	0.21	0.24	0.26	0.27
Isoleucine	0.43	0.51	0.57	0.61	0.65
Leucine	0.56	0.66	0.74	0.81	0.85
Lysine	0.63	0.79	0.88	0.96	1.01
Methionine†	0.40	0.48	0.54	0.59	0.62
Phenylalanine†	0.43	0.53	0.59	0.64	0.68
Threonine	0.37	0.44	0.49	0.53	0.56
Tryptophan	0.10	0.11	0.13	0.14	0.14
Valine	0.38	0.45	0.50	0.55	0.58

*Calculation based on the assumption that the requirement for all amino acids, expressed as a percentage of the protein, decreases linearly as the dietary protein increases. The rate of decrease is the same as reported for isoleucine by Becker et al (J. An. Sci. 16:26).

†Cystine and tyrosine can satisfy 40 and 30% of the total need for methionine and phenylalanine, respectively.

For dependable service, prompt delivery . . . order

DUPONT TWO-SIXTY-TWO®
FEED COMPOUND

from the agent nearest you

AGRICULTURAL SERVICES, INC.
402 Flour Exchange Bldg.
Minneapolis, Minn.

ARCH SALES CO.
1406 E. 47th Ave.
Denver 16, Colo.
Greeley, Colo.

BARTELS AND SHORES CHEMICAL CO.
1400 St. Louis Avenue
Kansas City 7, Mo.
700 East 17th St.
Wichita, Kansas

DAVIS ENTERPRISES, INC.
919 S. Perry St.
Dayton 1, Ohio

R. D. ERWIN CO.
838 Third National Bank Bldg.
Nashville 3, Tenn.

GOOD-LIFE CHEMICAL, INC.
301 South 1st St.
Effingham, Ill.

GRANDONE, INC.
Needham, Mass.

HARRIS-CRANE, INC.
221 S. Church St.
Charlotte, N. C.

LA BUDDE FEED & GRAIN CO.
741 N. Milwaukee St.
Milwaukee 2, Wisc.

P. R. MARKLEY, INC.
Lafayette Bldg.
Philadelphia, Pa.

PLESS & SHEAHAN
P. O. Box 2654
Memphis 2, Tenn.

SUNSET FEED & GRAIN CO.
805 Dun Bldg.
Buffalo 2, N. Y.

CARROLL SWANSON SALES CO.
Cedar Rapids, Iowa
620 Des Moines Bldg.
Des Moines 9, Iowa

VAN WATERS & ROGERS, INC.
P. O. Box 1663
Boise, Idaho
P. O. Box 1188
Dallas 9, Texas
1422 E. 6th St.
Los Angeles 21, Calif.
3950 N. W. Yeon Avenue
Portland 10, Ore.
650 West 8th South
Salt Lake City, Utah
16th & Carolina St.
San Francisco 19, Calif.
4000 First Avenue South
Seattle 4, Wash.
North 809 Washington
Spokane 1, Wash.

J. F. YOUNG CO.
3270 Southside Ave.
Cincinnati, Ohio

This bag of "Two-Sixty-Two" was cut open for inspection after warehouse storage in a hot, humid region. It was in excellent, free-flowing condition.

Located in key cities, these agents put "Two-Sixty-Two" within trucking distance of feed manufacturers. They offer you prompt, dependable delivery to help you keep up with increased demands on your inventory. You can also rely on the agent nearest you for technical assistance in adding "Two-Sixty-Two" to your cattle- and sheep-feed formulations. Their help is backed by Du Pont's 20 years of intensive work in the field of ruminant nutrition. When planning new feeds . . . it will pay you to draw on this experience and utilize the nutritional soundness and economy of urea, to help produce high-quality feeds at minimum cost.

Du Pont "Two-Sixty-Two" is the top-quality nitrogen source of protein. It is specially conditioned . . . free-flowing . . . for easier handling and better dispersal in feeds.

E. I. DU PONT DE NEMOURS & COMPANY (INC.)
Polychemicals Department

1616 Walnut St. Philadelphia 3, Penna. | 7250 N. Cicero Ave. Chicago 30, Ill. | 111 Sutter Street San Francisco 4, Calif.

Du Pont Company of Canada (1956) Limited, 85 Eglinton Avenue East, Toronto, Canada

The first and finest urea source of protein

DU PONT reg. U. S. pat. off.

TWO-SIXTY-TWO®
FEED COMPOUND

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

Schools for Barbecuers Slated in New England

TRENTON, N.J.—The Poultry & Egg National Board's barbecuers schools are scheduled for New England in May.

The first 1958 clinic will be May 8 at Nasonville, R.I. It will be primarily for experienced chefs to exchange ideas and broaden their field of knowledge, but newcomers are also welcome, according to a report by the Northeastern Poultry Producers Council.

The second meeting will be May 10 at Pulaski Park, Nashua, N.H.

Topics to be covered are fire management, cooking, sauces, equipment and serving techniques.

Required advance registration may be obtained by writing the Northeastern Poultry Producers Council, 10 Rutgers Place, Trenton 8, N.J., or PENB, Boston Office, 30 Huntington Ave., Boston, Mass.

JOHN F. YOUNG COMPANY
3270 Southside
Cincinnati 4, Ohio
WAbash 1-1950

We Are Distributors of Du Pont's
TWO-SIXTY-TWO

CAGE CLINIC

(Continued from page 16)

then, he asked, does it produce only 4% of its eggs?

Cage Hen Requirements: Courtney Allen, Hy-Line Poultry Farms, Des Moines, Iowa, outlined the now-known requirements for birds to be used in cage production, and described breeding efforts being exerted to produce birds better fitted for such production methods.

Layer Management: N. J. Robnett, Robnett's Poultry Farm, Lubbock, Texas, gave listeners a list of "Practices That Yield a High Percent of Top Quality Eggs."

Better producers lose about 3% of their production between the cage and the market-place, he said. Average producers lose more, in the neighborhood of 5%. Good management requires these things, he said:

Selection of a good breed; a high percentage of large eggs; a low blood and meat spot percentage (we've noticed that when feeding oyster shells, hens get excited, and our blood-spot count goes up, he said); shells properly shaped, with no mottling; a thick white, with a strong, upstanding yolk (feeding, management and breeding enter here, he said); uniformity in eggs.

Good pullets are essential—then vaccinate, he said. Limiting light for pullets to mature them more before they go into production will bring practically no "peewees" to start with. Feed a high-quality balanced ration with 17-18% protein (with maybe more energy in winter) but minimum protein of about 16%. For good shells, proper calcium-phosphorus balance is important, he said.

Sell cracked eggs at the door, he advised, and be sure and avoid ordinary cottonseed meal because it causes discoloration.

Low-quality fish oil is bad, he said. Desired yolk color can be gained by feeding for it.

"We've reduced losses most by the way we gather eggs," he said. "We've stopped the use of any kind of basket, and now use regular filler-flats on an electric cart for gathering. Here's what you do:

"Brush egg trays early each morning; keep fumes down; gather eggs three to five times daily; handle one egg at a time; don't fill baskets over half-full if baskets are being used.

"Don't set baskets on floor; handle eggs as little as possible; always put the little end of the egg down so the air-cell will remain in position and eggs won't go off-grade for this reason.

"Wash only the dirtiest eggs because of the chance washing will hurt quality or lead to broken eggs through rough handling; be sure filler-flats are strong and clean.

"Proper cooling done quickly is important; the first six hours are the most crucial in the life of an egg. Keep eggs at uniform temperatures; circulate cool air around eggs and maintain 70-80% humidity; cool eggs 24 to 48 hours; prevent sweating of eggs; keep cooler room free of dust and off-odors.

"Follow through your markets to keep good quality by proper handling. Cooling improves egg candling grade. See they're properly handled to and through the market. Use strong, double-walled cases, avoid over-stocking merchants, rotate eggs in his cooler and stack so oldest eggs go out first and educate consumers on the care and handling of eggs in the home.

"Finally, avoid hens over 18 months, keep good relations with your help and dispose of non-cooperative help."

Colony Cage Rearing: T. D. Craddock, Pierson-Craddock Feed & Hatchery, Hamilton, Texas, discussed colony-cage production of replacement pullets. This method permits lower-cost production, both in housing and in labor, he said, and he added that he keeps a separate cage for timid birds. Putting them together makes them develop out and make good hens, he says.

Range-Shelter Rearing: Bob Mayfield, Feather Crest Farms, Kurten, Texas, discussed range-shelter methods of replacement pullet production. Range rearing is much recommended

COLONY CAGE DISCUSSION—T. D. Craddock, Pierson-Craddock Feed & Hatchery, Hamilton, Texas, outlines the advantages and disadvantages of the colony cage method of rearing pullet replacements for cage layer operations during the recent Cage Clinic at Texas A&M College. E. D. Parnell, left, of the poultry science department at A&M, gazes at the ceiling as he listens intently. He was panel moderator. Dr. J. H. Quisenberry, next, head of the department of poultry science, checks his notes for his discussion of the confinement method of rearing. Seated at right is Bob Mayfield, Feather Crest Farms, Bryan, who discussed range rearing methods.

This machine is making money for you and your customers

Russ Lindstrom, Albers Nutritionist, with special Homoga-Mixing equipment for Albers Lab-Mix.

Here's the secret of Homoga-Mixing and Albers Lab-Mix for Poultry, Swine and Ruminants.

You and your customers form a strong team. You supply the nutritional knowledge and mixing know-how. He supplies good animals or poultry and sound management.

But this is a strong team only when both of you make a reasonable profit. *And the responsibility is yours as a feed mixer to see that you and your feeders make money.*

With Albers Lab-Mix you use 25 lbs. to 50 lbs. in a ton (depending on the type of animal and the formula). This amount of Lab-Mix is large enough to insure complete Homoga-Mixing, but small enough to show your feeders that they buy nothing in Lab-Mix raised on their farms; nothing you can buy locally for less.

WHAT IS HOMOGA-MIXING?

Homoga-Mixing is the exclusive process behind Albers Lab-Mix. Here's a step by step detail to show you why Lab-Mix makes a better ton of feed.

1. INITIAL PREMIXING: First, costly ingredients such as vitamins, antibiotics and minerals are mixed in this Homoga-Mixer. Its rolling and tumbling gyrations combined with an intricate arrangement of baffles, thoroughly disperse microscopic particles in a matter of minutes. This mix is then chemically analyzed by Albers Quality Control Laboratories.

2. SECONDARY PREMIXING: This premix is then added to the finest protein carrying agents, such as fish meal and meat meal. Homoga-Mixing is repeated.

The second stage thoroughly disperses each and every ingredient throughout the mix. Fat globules in the protein carrying agents hold these vital ingredients in complete suspension so that they do not settle into pockets. When Lab-Mix is added to other ingredients that make up your feed it blends completely with every pound, every ounce, for perfect consistency.

That's your insurance that your mixing job will be easier, faster and more effective.

Get all the facts about Albers Lab-Mix Program . . . Send your name, firm name and address to:

ALBERS MILLING COMPANY, LAB-MIX, Dept. F-48, 1016 Central St., Kansas City 5, Missouri

PICTURED BELOW ARE 3 OF 14 ALBERS LAB-MIX SPECIALISTS...CALL THE ONE NEAREST YOU COLLECT FOR LAB-MIX DETAILS

If your mixing plant is in Central or Southern Texas: call Joe Shearer, Box 809, Kerrville, Texas. Phone CLearwater 7-4022

In North Texas and Oklahoma: call Jim McGirk, 713 E. Morton St. Dennison, Texas. Phone Homestead 5-5754

In North and South Dakota: call Don Griffith, 2104 Norton St., Sioux Falls, S. D. Phone 2-3352

SW

FOR THE BEST IN

OAT CRIMPERS

SPROUT-WALDRON

MUNCY, PENNA.

but not much practiced in Texas, he says.

"I doubt the old saying 'basically, a range-developed pullet is 10% better than a confinement-reared bird'," he says. "However, our range-reared birds do better by comparison than any confinement-reared bird we've brought in.

"From a management standpoint, range shelters provide some headaches. Keeping them up during bad weather causes cannibalism, cost of labor is higher and they are more vulnerable to predatory animals.

"Cost of range shelters isn't much different from growing houses—maybe a little cheaper. We're going to stay with our range-rearing. But if we had to decide again—I don't know which way we'd go!"

Confinement Rearing: Dr. J. H. Quisenberry, head of the poultry science department of Texas A&M discussed the confinement-housing method of growing pullet replacements, and threw in a few words of caution.

"There are a great many ways to rear birds," he said. "Different methods fit different situations. However, we don't want to lose sight of some important basic figures. The major costs in rearing pullets are not affected noticeably by the method used. Those are chick cost, 36%, and feed cost, 46%, for a total of 82%. That leaves only 18% to be affected by such things as housing, labor, equipment and others. Don't lose sight of your big costs in scrambling to cut the little ones.

"We're moving rapidly toward confinement rearing in Texas," he continued. "Among the claims for confinement rearing are that birds can be watched more readily. There is a saving on labor (as much as 10 to 15% over range rearing), less land is needed, weather factors are less important, predatory animals become less important and light control is possible for controlling sexual maturation of the pullet. (He also cited Purina as doing good work on lighting research for maturation control.)

Disease Control: Dr. L. C. Grumbles, head of the department of veterinary microbiology at the Texas A&M school of veterinary medicine, told the group, "No matter how good your program is, one disease can just about nullify everything else you've done."

He estimated that fowl leucosis complex took a 20% toll of all chicks put down that are planned as egg-laying replacements.

On coccidiosis, he said, "We've almost universally adopted the practice of feeding a coccidiostat in the ration. There are some shortcomings in coccidiostats, but we can't afford to go back to where we were 20 years ago. You can have problems here with multiple-bird cages.

On roundworms, or ascarid, he said, "Plan your management program so you won't have these. You can't prevent damage by immature forms, even though adults can be removed."

The northern fowl mite, he said, can be brought in by free-flying birds. Management practices which he advised include:

Keep various ages of birds apart. One reason for this is roup, or endemic fowl cholera. One roup-infected carrier, which does not show symptoms, can just about wreck your cage operation, he said.

Maintain adequate floor space in breeding areas.

Thoroughly clean and disinfect every inch of cages and equipment between flocks. Move range birds about to keep them on clean areas.

Discussing Newcastle disease, he said that Newcastle B, does not have the ability to completely protect birds from the respiratory form of this disease. There is some protection from it however, he says. "Until we have something better, we recommend it, because there is some help."

"Most important," he said, "when you think you have a disease problem get an accurate diagnosis!"

Feed Formulation: Dr. J. Russell Couch, biochemistry and nutrition and poultry science departments, says more additives are required in formulation of feeds for hens in cages than for hens on litter.

"Everything she needs for health and production must be in the feed trough," he explains. "There are 15 chemicals or drugs in feed today which have been demonstrated to bear on egg production and profit.

"Restricted feeding from six to eight weeks of age till egg production seems to bring desirable effects—lower cost, smaller body weights, older birds at production time.

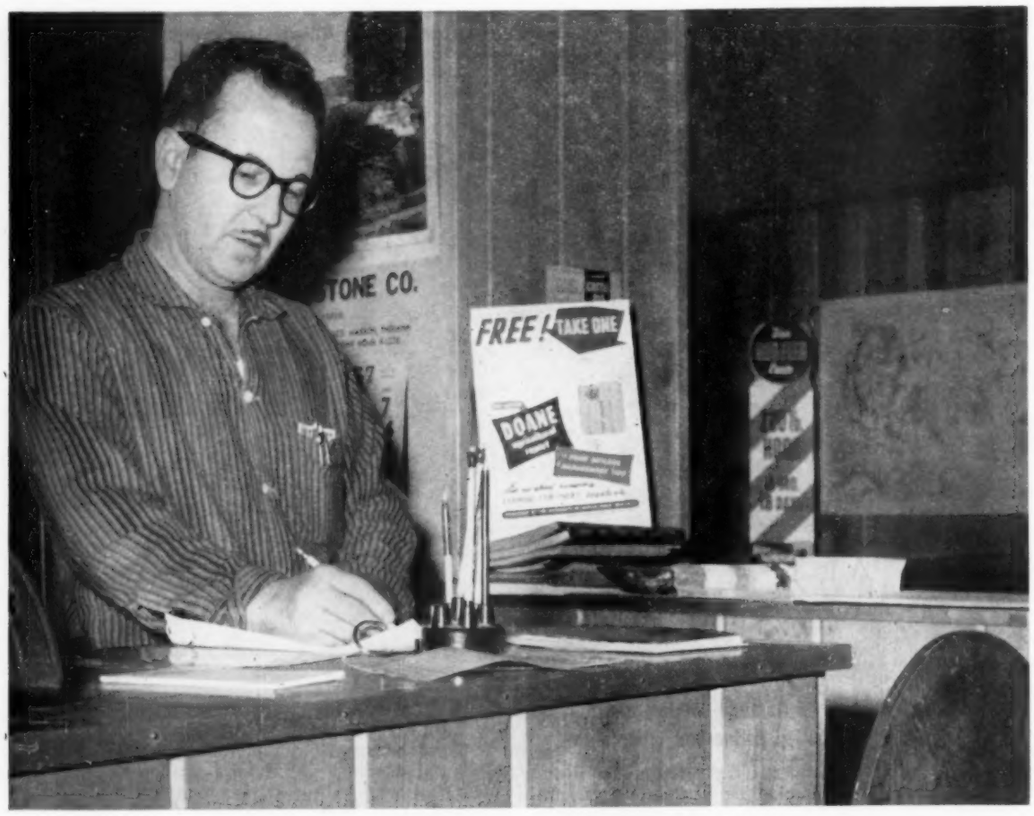
"Restricted feeding has more pronounced effect on broiler types than on laying types," he said. He also discussed efforts to find a self-restricting additive to feed formulas. One in which 58% rice hulls were added for bulk, making the chicken's crop the restricting agent because it just wouldn't hold more, seemed to help.

"You can get best results by feeding a complete, fortified, all-mash ration," he told the group.

Some interesting observations pertaining to efficiency also were offered. "Add 100 calories—improve feed conversion 10%," he said. "Use 2½ to 5% fat, and you improve feed conversion."

On fatty liver disease, he says that 1,000 grams choline per ton of feed seems to completely eliminate this disease which has begun to bother cage operators.

Symptoms of fatty liver diseases, as outlined by Dr. Couch, are: "The bird can appear to be in excellent condition—and die suddenly. The liver may be ruptured. There may be ex-



Mr. W. R. Aukerman, owner, Amboy Grain Company, Amboy, Indiana

"Farming for Profit"... unique service to your customers

Doane monthly reports help feed dealers serve farmers through last-minute analysis of price trends, latest practices to cut costs and boost income.

More and more feed dealers are using "Farming for Profit" as the nucleus of a service-type public relations program to build their business and to promote sounder agriculture in their communities.

This terse, authoritative, easy-to-read bulletin compresses the thinking of some of our best-informed agricultural brains into money-making, money-saving capsules of information.

Amboy Grain Company, Amboy, Indiana, for example, is a long-time user of "Farming for Profit" as a public relations force. Mr. W. R. Aukerman, owner of Amboy Grain Company, says, "We feel 'Farming for Profit' is doing a good job for us. We get a lot of comments and our customers appreciate getting it."

Let Doane's "Farming for Profit" help build your feed business. Send "Farming for Profit" to your customers and prospects and help them to cut costs and increase their incomes.

Write today and see how little it costs to identify your business with this unique service to farmers.

"Farming for Profit"® is prepared and edited by Doane Agricultural Service, Inc., . . . the oldest and largest organization in the United States engaged in farm management and agricultural research.

DOANE AGRICULTURAL SERVICE, INC.

5142 Delmar Boulevard, St. Louis 8, Missouri

SEND FOR THE NEW ELTON CONVEYOR CATALOG
It will save money for you!
CHANTLAND MFG. CO.
Humboldt, Iowa

More profit on feed when you mix your own brand!

BROWER *Whirlwind* FEED MIXER

Earn up to $1.50 profit per bag by mixing your own brand of feed with the BROWER MIXER . . . the extra profits soon pay for it! WHIRLS the ingredients instead of just tumbling them . . . mixes a perfect blend in about 10 minutes . . . fast, economical! Built for years of trouble-free service. Five sizes. World's Largest Selling Mixer!

BROWER MFG. CO., 566 N. Third St., Quincy, Ill.

Write for FREE CATALOG

cessive fat in the abdominal cavity, the liver and the kidneys.

"Treatment—add choline, vitamin E and vitamin B_{12}."

About cage fatigue, he said researchers don't know what to put in the feed. In the case of loose droppings, production isn't seriously affected, but feed conversion shows some effect. Fungicidal agents seem to provide some relief, he said.

Environment Control: L. E. Deacon, B&D Mills, Grapevine, Texas, discussed the subject, "Controlling Environment for Optimum Performance in Cage Houses." He outlined the heat-and-cold tolerance of hens, and described research with cage cooling methods.

A hen's lower fever threshold is about 15° F., he said, which means that at or below that temperature, the hen cannot provide enough heat, and body temperature begins to drop.

At 70-75° hens lose weight, egg shells are thinner, and "you need cooler weather," he said. At 85° body temperature begins to rise, egg production and feed consumption starts declining in heavy birds; 90° gives the same result with lighter birds.

At 95°, fertility decreases in both types. At 100° there is a sharp decline in egg production and feed consumption, and some heavier birds die. At 105°, light hens die in about six hours. Effects of heat are more noticeable when changes are sharply pronounced. In other words, hens can become partially acclimatized over a period of time.

However, 55 to 60° is the best temperature for production, he said.

"Evaporation of 1 lb. water takes out as much heat as melting 7 lb. of ice," he told the group. "The pad-and-fan method of evaporative cooling opens a completely new horizon, so far as research is concerned." This new horizon includes such objectives as healthier birds and bigger eggs.

"We have data available now on cooling that is going to improve the incomes of livestock and poultry producers across the South," Mr. Deacon said.

Fly Control: The final speaker on the regular sessions was Dr. Quisenberry, who discussed "Feeding for Fly Control."

"Fly control has made many people wonder whether they should have gone into the cage business. It's made many get out," he said. "If we could find an inexpensive larvacide which we could put into the feed and do the job, we'd be well along on the road.

"All it has to do is to kill the fly but not kill the bird. It also would enter the food control sphere, since almost all chemicals eaten by the hen find their way into the eggs," he added. "There are already a lot of big agricultural chemical people screening compounds with this in mind."

Dr. Quisenberry reported on work with several chemicals, some of which did not work, but one of which shows promise. That is Polybor 3. Used at the rate of 3 to 6 lb. to a ton of feed, this one seems to hold some hope, he said. "No doubt there are other compounds, some of which we might already have, but just haven't used this way as yet. At any rate, much more screening needs to be done," he concluded.

Written questions from conference participants, who were issued cards for the purpose in order to prevent interrupting the closely scheduled program, kept a panel of the speakers for an hour after the close of the regular program and would have kept them longer had Ben Wormeli, Texas extension poultryman, who served as conference chairman, not intervened.

OPENS FEED STORE

MABEL, MINN. — Harold Karli, Lewiston, Minn., Winona county agent since 1956, has started a feed, seed and fertilizer business here. Known as the Karli Farm Service, the business will specialize in mobile feed grinding, mixing and shelling.

NOW!

NEW, IMPROVED

KASCO® DOG FOOD

TO BRING YOU
BIGGER VOLUME AND FASTER TURNOVER!

Now more than ever before, it will pay you to *stock, push* and *sell* the famous dog food that's "always a step ahead of competition".

For new, improved Kasco gives your customers everything they have looked for in a dog food!

MORE FLAVOR!
Even the most finicky feeders will love its "dog-licious" real meat aroma.

MORE ENERGY!
More food value—more scientifically balanced vitamins—more high energy fats, help keep dogs in top condition the year round.

MORE DIGESTIBLE!
Digests easier—more completely than any other brand tested—converts more completely into body builders.

ECONOMICAL, EASY TO FEED!
Absorbs water instantly—ready to feed immediately. Complete, concentrated Kasco goes farther.

NOW! better than ever...
America's Most Recommended Dog Food

Corn Products Refining Company

MAKE BETTER FEEDS AT LESS COST!

USE ONE PRODUCT CONTAINING ALL THREE

U.G.F. • F.E.F. • ENZYMES

Specifide's TRI-FERM Alone Provides:

U. G. F.—

If skyward jumping cost of fishmeal is pricing you out of line, start using TRI-FERM (and S.B.O.M.), which provides the U.G.F.s contained in fishmeal, whey, and other sources, as well as F.E.F., at less cost than fishmeal. TRI-FERM is a direct fermentation product, use of which was recommended at Midwest Conference to reduce feed manufacturers' costs.

F. E. F.—

You can increase efficiency of your feeds as well as lower the cost, by adding 5 lbs. (or even less) of TRI-FERM which contains F.E.F., a proved efficiency factor. With TRI-FERM (using no fishmeal) laying feeds are producing eggs as low as 12c per doz., pork at $7.60 per cwt., and broilers and turkeys at comparably low prices. TRI-FERM is also effective in beef rations.

ENZYMES—

Enzymes are the key which unlocks nutrients bound up in feeds, increasing the feeding value of barley, oats and corn rations. TRI-FERM is a rich source of amylases, proteases, and cellulases which aid growth and feed conversion. PROOF: 3.66 lb. broilers in 8 weeks on rations containing no fishmeal, whey, or distillers products; 1.88 Feed Efficiency using only 5 lbs. of TRI-FERM per ton of feed.

Order TRI-FERM Today

The Economical Replacement
Which Supplies All Three

- Unidentified Growth Factors
- Feed Efficiency Factor
- Enzymes

If you, a Feed Manufacturer, would like more information on results of various formulas with TRI-FERM added, please

WRITE
WIRE
PHONE

Specifide, Inc.

Farmaceuticals

P.O. Box 55263 • Indianapolis, Ind.

Phone WAlnut 5-7538

Weights Up, Mortality Reduced in Georgia Broiler Enterprise

ATHENS, GA.—A mortality rate cut more than 50% was reported recently by the poultry department of the University of Georgia, in tabulating the operation of one large broiler dealer in north Georgia.

According to Arthur Gannon, extension poultryman, the dealer, who sold in excess of 2.5 million birds in 1956 and 1957, had his mortality rate drop from 2% to .7% while his feed conversion on the entire production was improved from 2.55 lb. of feed per pound of live weight bird to 2.38 lb.

The average weights, Mr. Gannon indicated, increased from 3.03 lb. to 3.20 lb. while the average period for both years was 9 weeks and 2 days.

In pointing to the remarkably low mortality rate, Mr. Gannon said the lowest rate was in October, while the highest was in March, 1957. During the last two months of the year, when many dealers were suffering severe losses due to an "unidentified malady," this dealer reported losses of .5% in October, 1% in November and 1.1% in December.

The high mortality rate in March, was 1.4%, while the low, in August, was .1%.

The highest weight attained on the 1957 average was 3.24 lb. in both June and November, while the lowest was in January and August with 3.12 lb.

The best 1957 feed conversion figure of 2.32 was in September, while the 2.47 in February was the highest.

The highest weight average of 1956 was 3.14 lb. in September, with the best feed conversion 2.44 lb. made in November and December of that year. The peak mortality month of 1956 was August with 3.4%, while the lowest was 1.1% in December.

The peak production in both years was October, Mr. Gannon reported.

Broiler Averages

(One Dealer in North Georgia

Month	No. head sold	Age, wks.-days	Average weight	Average feed conv.	Per cent mortality
1956—					
January	172,782	9-1	3.02	2.73	2.4
February	199,459	9-0	2.96	2.68	2.3
March	213,283	9-0	2.97	2.62	2.0
April	186,122	9-0	3.07	2.63	2.2
May	224,803	9-0	3.00	2.55	1.7
June	232,053	9-1	2.98	2.54	2.0
July	189,340	9-3	2.99	2.54	2.1
August	240,843	9-4	2.97	2.53	3.4
September	231,321	9-5	3.14	2.49	2.2
October	271,496	9-3	3.15	2.49	1.0
November	184,341	8-6	3.05	2.44	1.7
December	192,670	9-2	3.01	2.44	1.1
Average for year	2,538,513	9-2	3.03	2.55	2.0
1957—					
January	226,165	9-1	3.12	2.45	1.2
February	159,876	9-3	3.23	2.47	0.8
March	200,525	9-0	3.16	2.38	1.4
April	225,437	9-1	3.15	2.39	0.7
May	213,492	9-2	3.19	2.34	0.0
June	222,472	9-4	3.24	2.35	0.6
July	240,419	9-4	3.13	2.40	0.7
August	271,635	9-4	3.12	2.38	0.1
September	217,736	9-5	3.30	2.32	0.6
October	273,883	9-3	3.30	2.34	0.5
November	155,407	9-1	3.24	2.35	1.0
December	164,400	8-5	3.22	2.35	1.1
Average for year	2,591,487	9-2	3.20	2.38	0.7

ANDERSON

VEGETABLE OIL PROCESSES

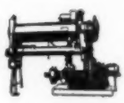
Low Residuals
High Capacities
Economical Operation

EQUIPMENT and PROCESSES for every VEGETABLE OIL BEARING MATERIAL

- castor beans
- copra
- corn germs
- cottonseed
- flax
- ground nuts
- mustard seed
- palm kernels
- pecans
- rape seed
- rice bran
- safflower seed
- sesame
- soybeans
- sunflower seed
- tung nuts
- and many others

ANDERSON PROCESSES

High Capacity Expellers
A high-speed mechanical Expeller screw press process



Grain Expanders
Expand corn, wheat, hominy feed into crisp, palatable, products

Exsolex Process
The patented Expeller prepress, solvent extraction method

Meal Extraction
Low-cost, prepress solvent process to produce granular meals

AND VEGETABLE OIL MILLING EQUIPMENT

Dryers
High capacity removal of moisture from grains and vegetable oil seeds

Flaking and Rolling Mills
Make uniform flakes of any specified thickness

Screening Tanks
Product oil cooling systems

Cooker-Dryers
Properly condition oleagineous materials

Inventors of the World Famous Expellers®

THE V. D. ANDERSON COMPANY

division of International Basic Economy Corporation

1944 WEST 96th STREET • CLEVELAND 2, OHIO, U. S. A.

Wilson & Geo. Meyer Dedicates New Plant

SAN FRANCISCO—Wilson & Geo. Meyer & Co. and its affiliate, the Wilson Meyer Co., Pacific Coast sales representatives for Eastman Chemical Products, Inc., a subsidiary of Eastman Kodak Co., officially dedicated their new, enlarged Southern California offices, warehouse and bulk storage facility at 2060 So. Garfield Ave., Los Angeles, recently.

William S. Vaughn, president of Eastman Chemical Products, Inc., came from Kingsport, Tenn., to inspect the new plant and attend the ceremonies at which Wilson Meyer of San Francisco, president of the Meyer firms, officiated.

Wilson & Geo. Meyer & Co. has been sales representative on the Pacific Coast for the past 21 years for Eastman Tenite plastics and Kodapak sheet manufactured by Eastman Kodak Co. at Rochester, N.Y. The Wilson Meyer Co. was formed in 1951 to handle exclusively on the Pacific Coast Eastman chemicals, as distinguished from Eastman plastics. The parent Meyer firm was founded in 1850.

The new plant, erected at a cost of $500,000, doubles the Meyer firm's Southern California office, warehouse and storage facilities.

Is your office getting too few copies of FEEDSTUFFS?

MAIL THIS COUPON TODAY

FEEDSTUFFS
2501 Wayzata Blvd., P.O. Box 67
Minneapolis 1, Minn.

Please enter my subscription:

☐ CHECK ENCLOSED ☐ BILL ME

NAME .....

ADDRESS .....

CITY .....

STATE .....

Type of Business:

☐ FEED MANUFACTURER
☐ FEED DEALER
☐ OTHER .....

RATES: $4 a year, $7 for two years, in U.S., Possessions and Canada. Foreign: $3 a year additional.

A fire broke out in a small-town church: When the fire brigade, siren wailing, arrived on the spot the minister recognized one of the men. "Hullo, there, Jim—I haven't seen you in church for a long time," he chided.

"Well," answered the sweating man, struggling with the hose, "there hasn't been a fire in church for a long time."

◆ ◆ ◆

A man who had made a lot of money in a hurry managed to get elected to a very exclusive club. Approaching an old member, he held out his hand upon which glittered a huge diamond. With a self-satisfied smirk, he asked:

"What would you do if you owned that?"

The exclusive one looked at the hand and the diamond. Then, in tones of acid politeness, he replied:

"I'd sell it and buy a nail-brush."

◆ ◆ ◆

"If you could have two wishes," said one girl to another, "what would they be?"

"Well," said her friend thoughtfully, "I'd wish for a husband."

"That's only one," pointed out the first girl.

"I'd save the other until I saw how he turned out."

◆ ◆ ◆

Arriving at a strange hotel, a fussy woman thought she'd better locate the fire escape. She started exploring, opened a door and found herself in a bathroom occupied by an elderly gentleman.

"Oh, I'm sorry," she twitted. "I was looking for the fire escape."

Continuing her search, she presently heard the pad of bare feet behind her. It was the elderly man, clad in a bath towel.

"Wait a minute," he gasped, "where's the fire?"

◆ ◆ ◆

The horny-handed boy had been hired to do some hauling. The job completed, he was informed that it would be necessary to submit a statement before being paid. After much study, he produced the following: "Three comes and three goes at four bits a went, $3."

◆ ◆ ◆

Mother (speaking to school teacher): "My Harold is a very sensitive boy. If you need to punish him, just slap the boy in the next seat. This will frighten Harold."

◆ ◆ ◆

A couple of young boys walked into the dentist's office and one faced boldly up to the dentist and said, "Doc, I want a tooth took out and I don't want no gas 'cause I'm in a hurry."

"My," said the doc, "I must say you're a brave boy. Which tooth is it?"

The little boy turned to his friend and said, "Show him your tooth, Albert."

"Gee, he must have eaten SUCRO-FLAVOR since he was a baby"!

Copyright 1958 by
FLAVOR CORPORATION OF AMERICA
3037 N. CLARK STREET · CHICAGO 14, ILLINOIS

MEDOGREEN®
Alfalfa Meal
Pellets
Crumbles
Bulk or bags

ALFALASS®
Alfalfa, Nature's Own Balanced Ration, with Molasses Added

BREMCO ALFALFA MILLS, INC.
New Bremen, Ohio — Phone 3251 or 3221

AMERICAN ELEVATOR & GRAIN DIVISION
Russell-Miller Milling Co.
P.O. Box 157, Buffalo, N. Y., Phone MAdison 6007, Teletype BU 550
SHIPPERS CARLOAD LOTS—CHOICE WHEAT, CORN, OATS, BARLEY
TERMINAL ELEVATORS AT
BUFFALO — DULUTH — MINNEAPOLIS
New York — Minnesota — Minnesota

Business-Builders for Feed Manufacturers

"Do-It-Yourself" Information for Farmers

ALSO AVAILABLE IN 50-LB. BAGS
Here is the ideal, fast-selling package for direct sales to farmers and cattlemen.

These authoritative leaflets on the advantages and correct usage of Paco Molasses Distillers Dried Solubles are responsible for improvement and increased business in all formula feeds. They contain exactly the kind of information wanted by Feed Manufacturers . . . no exaggerated claims, no "bull." Just the facts on what PACO is, what it will do, what it has done, how to use it for bigger profits.

The complete line of Paco folders is now available to all Feed Manufacturers and Dealers, for their own information, along with other literature to distribute to their customers. If you are not acquainted with PACO and its many advantages as a fortifier and "freshener" for all types of feeds, we will be pleased to send by return mail the data you check on coupon below.

PACO MOLASSES DISTILLERS DRIED SOLUBLES

A PRODUCT OF
PUBLICKER INDUSTRIES INC.
ANIMAL FEED SALES DEPARTMENT
1429 WALNUT STREET, PHILADELPHIA 2, PA.
PHONE: LOCUST 4-1400

PUBLICKER INDUSTRIES INC.
Animal Feed Sales Department, 1429 Walnut St., Philadelphia 2, Pa.
Without obligation send the following:
Check Here
☐ POULTRY FEEDS with PACO
☐ SWINE FEEDS with PACO
☐ DAIRY and BEEF CATTLE FEEDS with PACO
Folders to distribute to our customers:
Indicate no. desired
CUSTOM MIX DAIRY FEEDS with PACO
FARM USES of PACO
CLIP THIS COUPON TO YOUR LETTERHEAD

MIDWEST SALES AGENT—Publicker Alcohol & Chemical Sales Corporation, 101 Arsenal St., St. Louis, Missouri. Telephone: PRospect 6-0858

☆ Classified Ads ☆

Classified advertisements received by Tuesday each week will be inserted for the issue of the following Saturday. Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Display advertising accepted for insertion at minimum rate of $10.50 per column inch. All Want Ads cash with order.

HELP WANTED

WANTED POULTRY NUTRITIONIST, must have at least major. Wonderful opportunity. Loret Mills, Chattanooga 8, Tenn.

SALES REPRESENTATIVE FOR OHIO and Indiana, individual or firm to sell established antibiotic supplement to feed dealers and elevators—profitable terms. Send resume. Address Ad No. 3695, Feedstuffs, Minneapolis 40, Minn.

EXCELLENT SIDE-LINE OR FULL TIME item for salesman selling to feed, grain, farm equipment dealers and farmers. Liberal commissions. Replies will be held confidential. Write Doane Agricultural Service, Inc., St. Louis 8, Mo.

FEED MILL SUPERINTENDENT — WE need an experienced feed mill superintendent to manage one of our Midwest feed mills. Age 30-45. Excellent opportunity in growing company. Address Ad No. 3693, Feedstuffs, Minneapolis 40, Minn.

DISTRICT MANAGER WANTED—LARGE national vitamin company needs experienced man to represent them in Arkansas, Mississippi, Alabama, Tennessee. Background in nutrition desirable. Must be now living and working in the territory. Address Ad No. 3673, Feedstuffs, 141 W. Jackson Blvd., Chicago 4, Ill.

SALESMAN WANTED

I am looking for a representative presently calling on feed dealers and elevators to carry a well established calf milk replacer. Distributed nationally and backed by national advertising. Will add $300 to $500 per month income for good, energetic man. A few choice territories open.

Give complete details. Write P. O. Box 5020, Minneapolis, Minn.

FEED SUPPLEMENTS SALES

Borden Company's Feed Supplements Department has excellent opportunity for technical sales representative. Practical experience and degrees in animal or poultry science necessary. Must be qualified to offer formula assistance. Protected territory. Salary plus commission plus expenses. Liberal benefits program. Reply in full to Feed Supplements Department, The Borden Company, 350 Madison Ave., New York 17, N.Y.

HELP WANTED

OPENING FOR EXPERIENCED FEED mill superintendent, central California, urban location. Address Ad No. 3674, Feedstuffs, Minneapolis 40, Minn.

SALESMAN CALLING ON FEED DEALERS and elevators in Ohio or Indiana. Profitable sideline—established antibiotic supplement for hogs—backed by advertising. Send resume. Address Ad No. 3694, Feedstuffs, Minneapolis 40, Minn.

SITUATIONS WANTED

FEED EXECUTIVE WITH PROVEN ABILity in material buying and all phases of grain transit seeks position with potential. Age 33. Address Ad No. 3684, Feedstuffs, 141 W. Jackson Blvd., Chicago 4, Ill.

EXPERIENCED FEED MILL SUPERINtendent—Capable of assuming complete responsibility of all feed mill operations. Available April 15. Prefer southern states location. Best of references. Address Ad No. 3699, Feedstuffs, Minneapolis 40, Minn.

MATURED TERRITORY, DISTRICT, MANagement sales and service experience. Wants to contact principals at AFMA for 20 years' retirement pay-off based upon my ability to produce. Address Ad No. 3696, Feedstuffs, Minneapolis 40, Minn.

FEED EXECUTIVE WITH SUCCESSFUL history in general management, production, procurement, and sales, seeks administrative position with heavy responsibility. Proven ability. Address Ad No. 3697, Feedstuffs, Minneapolis 40, Minn.

WELL ESTABLISHED INGREDIENT sales executive with excellent following East Coast; successful record promoting new products; farm management background; nutrition and animal husbandry degree from leading agricultural college, seeks connection with growing concern. Address Ad No. 3636, Feedstuffs, Suite 3214, 551 Fifth Ave., New York 17, N. Y.

MACHINERY WANTED

ALL KINDS OF GOOD USED GRAIN processing machinery. E. H. Beer & Co., Inc., Baltimore 2, Md.

WANTED TO BUY — RICHARDSON scales, bag closing machines and other good mill, feed and elevator equipment. J. E. Hagan Mill Machinery, Jefferson City, Mo.

Use FEEDSTUFFS Want Ads for RESULTS

MACHINERY FOR SALE

WHIRLAWAY AIRBLAST CAR LOADERS, cast iron pulleys, new and used feed and elevator equipment. Hagan Mill Machinery, P. O. Box 574, Jefferson City, Mo.

FOR SALE—ENCLOSED MOTORS; RICHardson Scales; truck scales; hammermills; oat crimpers; horizontal and upright feed mixers; sewing machines; elevator legs; screw conveyors; molasses mixers and pellet mills. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

FEED MIXER, 1-TON CAPACITY, guaranteed first-class throughout, 5 H.P. motor drive. Address Ad No. 3479, Feedstuffs, Minneapolis 40, Minn.

WINSTED BALE SHREDDER, NEARLY new. Calvert Milling Co., Hoytville, Ohio.

RICHARDSON 6-BUSHEL GRAIN SCALE. $435. Address Ad No. 3658, Feedstuffs, Minneapolis 40, Minn.

LATE 1955 DAFFIN MOUNTED ON 6400 Chev. A-1 condition. Address Ad No. 3683, Feedstuffs, Minneapolis 40, Minn.

PNEUMATIC "AIR-CONVEYOR" SYSTEMS —Positive pressure, Sutorbilt, new or used, any size, capacity, distance or product. Nolder Co., Box 14, Corona Del Mar, Cal.

24-TON MOLASSES TANK, STEEL LEGS. In very good condition. With 4-inch valve. Robert A. Ross, 309 Clay St., Watertown, Wis.

YEAR-OLD "UNIVERSAL" PELLOMATIC dry pellet mill with 3 dies, pellet crumbling rolls, pellet scalper, all complete with electrical. Archer Cooperative Grain Co., Archer, Iowa.

ROLLER MILL — ALLIS CHALMERS Style N Roller Mill 9"x30", two pair high with four spare rolls. Used on soybeans. Best Equipment Co., 1737 W. Howard St., Chicago 26, Ill.

FOR SALE—FOUR 9" U TROUGH SCREW conveyors, complete with covers; practically new; one 16 ft. long, two 12 ft. long, one 20 ft. long. One OK Bagging Scale (100) lbs. same as new. Three Draver Feeders same as new. One-ton size Munson Horizontal Mixer. Write or phone us at Rosewood Grain Co., Rosewood, Ohio.

FOR SALE—NO. 5A BLUE STREAK MILL with crusher feeder, dust collector, piping, elbow, screens, 50 H.P. motor and starter. No. 6AC Blue Streak Mill with dust collector, screens and piping for use with 75 H.P. motor. No. 3AC Blue Streak Mill with screens, dust collector, pipe, for use with 40 or 50 H.P. motor. Available immediately. Priced to move. Write or phone Wadington Feed Mill Supplies, 2300 Fourth Ave. S. E., Cedar Rapids, Iowa.

BRAND NEW RICHARDSON G-38 MASH feed bag scale, ½ price; two Apex, one Mikro Weight bag scales, 50 & 100 lb.; two used G-38 Richardson; one molasses feed; one Richardson grain sacking scale, 3 bu., automatic; four small sack scales, 25 and 50 lb.; 49A Clipper, near new; Edd. Huller-Scarifier; three G-W Jumbo corn sifters; style Q Allis 15x30 crimper; No. 8 Oliver separator; 1-ton K-D mixer with signal bag scale; new Anglo molasses mixer. Other items. Write us your needs. Ross, Inc., 12 N.E. 28th St., Oklahoma City, Okla.; Phone JA 8-2132.

Steel Storage for Grain

Large capacity steel tanks completely erected and ready to receive grain. Includes aeration and auger, 19c per bu.

COLEMAN, INC.
NORTHWOOD Phone 519 IOWA

FIVE BARGAINS

Used Feed Mill Equipment

1—100 H.P. Jay Bee Hammer Mill complete with motor, starter, controls, two (2) ground grain bins (steel) 24,000-lb. capacity, each with Cyclone. Good condition	**$3,250.00**
2—Two No. 2A Eureka Cereal Cutters with motors, extra cutting knives. Fair condition. Each	**550.00**
3—Four Buffalo Molasses Meters. Good condition. Each	**85.00**
Two Buffalo Meters, calibrated for fats (like new). Good condition. Each	**125.00**
4—Richardson Automatic Scale, 100 lb. weighings. Fair condition	**350.00**
5—Four Wenger Metering Pumps with gear head motors, direct connected on base (for fats). Good condition. Each	**485.00**

UNCLE JOHNNY MILLS
P.O. Box 236, Phone FAirfax 3-3181
HOUSTON, TEXAS

MISCELLANEOUS

FOR SALE—BUILDINGS ON RAILROAD siding; presently occupied as seed warehousing and processing plant. Suitable for feed mill, elevator and other feed, seed or grain purposes. Elevated bulk bins, ample warehouse storage. Ohio location; U.S. highway adjacent. Reasonable. Address Ad No. 3648, Feedstuffs, Minneapolis 40, Minn.

BUSINESS OPPORTUNITIES

FEED MANUFACTURING AND RETAIL feed business. Complete grinding and mixing operations. Beacon Milling Co. feeds. Going business in southern Chester County, Pennsylvania, heart of big dairy area. Very reasonable. Fisher & Son Co., Malvern, Pa.

PROFITABLE SMALL FEED BUSINESS— Located in thriving Colorado university town. Excellently located to trackage and highway. Plenty of parking space. Low overhead. Plenty room for expansion. Selling own brand of feed and handle advertised line. Same owners over 12 years. Selling account of health. For details write P. O. Box 447, Fort Collins, Colo.

FOR SALE

COMPLETE FEED MILL IN TOMS RIVER, N.J. ALL MACHINERY INTACT, READY TO OPERATE.

Tidewater Machinery Co.
10 South 18th Street
Philadelphia 3, Pa.

Fine Business Opportunities
FEED MILLS and ELEVATORS
We Can Help You When You Want to Buy or Sell Your Business
Phone or Write
MID-WEST BUSINESS EXCHANGE
Halbert C. Smith Plymouth, Ind.

SALESMAN

With Purina or similar training to travel established Wisconsin territory for leading seed firm. Seed experience not necessary. We are aggressive merchandisers with research program. Many benefits including profit sharing. This is a wonderful opportunity with advancement possibilities. P.O. Box 624, Milwaukee 1, Wisconsin.

SALES MANAGER

Farm Seed

To direct field sales force for leading midwest farm seed firm with strong advertising, merchandising, research program. Seed background preferable but not necessary. Experienced feed sales manager would be considered. This is important executive position. Address Ad No. 3689, Feedstuffs, Minneapolis 40, Minn.

TECHNICAL SALES SERVICE FORMULA FEEDS

Do you have the knack of applying technical information from the research laboratory to the problems of farmers or feeders? Is this ability backed up by at least three years' experience in technical service or sales of formula feeds? If the answer is "Yes," Archer-Daniels-Midland Company has a place for you in its rapidly expanding Formula Feed Division. You must be sales-minded, willing to travel and able to put your ideas in words and writing. Salary and age open. We invite you to submit a resume of your qualifications for prompt and confidential consideration. Employment Manager, Archer-Daniels-Midland Company, 700 Investors Building, Minneapolis, Minn.

February Meat Production Off 11%

WASHINGTON — Red meat production in commercial slaughter plants of the nation during the month of February was 20% below the month of January and 11% off the pace of February, 1957, the U.S. Department of Agriculture announces.

Output for February, 1958, was 1,809 million pounds, compared with 2,267 million in January and 2,026 in February of a year ago. Commercial meat production includes slaughter in federally inspected and other slaughter plants, but excludes farm slaughter.

Combined production for the first two months of 1958 was 4,076 million pounds, or a drop of 9% from the 4,462 million pounds produced during the corresponding period of 1957. Of the January-February volume, 2,171 million pounds were beef, down 10% from last year; 192 million pounds were veal, down 18%; 1,601 million pounds were pork, down 5%, and 112 million pounds were mutton and lamb, down 15% from 1957.

The number of cattle slaughtered during the two-month period was down 11% from the comparable period in 1957. Calves were down 15%, hogs down 6%, and sheep and lamb slaughter down 17%.

FORMER MILL SOLD

ONTARIO, ORE. — Ontario Industries, Inc., an Ontario group formed to encourage new industries moving into that eastern Oregon area, recently made its first property purchase, the former Blue Mountain mill, located near Ontario. Earl Bopp, chairman of the group, said the purchase was made to provide a site for any new industry which may be interested in moving into the area. Purchase price of the property was $27,500 and the seller was Oscar Welch, Grangeville, Idaho.

Here is one corner of a Milwaukee Railway boxcar that had Fiberglas behind its end linings for more than seven years. Dark spots in the wool indicate where specimens have been removed for checking or where it has been broken when the end lining was removed.

Fiberglas-Lined Boxcar Inspected

The end liners were taken from a Milwaukee Railway boxcar in Minneapolis recently to show a group of millers, members of the sanitation committee of the Association of Operative Millers and railway officials the condition of the Fiberglas lining behind it.

The car had been in service for more than seven years since the lining was last inspected. The lining was placed in the ends of the car in October, 1950, and it was opened for inspection in 1951.

Examination of the car revealed that the Fiberglas lining had been successful in fulfilling its twofold purpose: (1) Elimination of rodent and insect harborage behind the end lining and (2) reduction of deterioration of the metal ends from rust.

There are now 20,000 railway boxcars in service with Fiberglas behind their end linings. The method for placing Fiberglas behind the end linings is known as the Bishop System, a system which has been developed by Frank S. Bishop of Minneapolis. Mr. Bishop had Fiberglas placed behind the end lining of a boxcar in 1947 and ran the car on test until November, 1949, before offering his system on a commercial basis.

Mr. Bishop said that his system prevents any bulk lading from going back of the end liners to create an infestation problem. He pointed out that Fiberglas will not deteriorate from moisture and that the car can be steam-cleaned without harming it.

Insects cannot live in the Fiberglas, Mr. Bishop said, because they cannot find sustenance upon which to live. The lining keeps them out where it is easy to get at them with fumigants, he added.

FREE INFORMATION

Dehydrated Corn Cob Meal has a place in your feed program! Paxco Dehydrated Corn Cob Meal, high in quality and most economical, is offered in a variety of grinds to suit your needs. Write for information, samples, prices.

PAXTON PROCESSING CO., INC.
P. O. Box 120 Phone 222 Paxton, Ill.

FEED STORE OPENED

SMITH CENTER, KANSAS—Paul Humrich, dealer in grains and feeds for the past 19 years, has opened a feed supply store in Smith Center. He has been granted the Purina franchise for Smith County, marking an expansion of his established business.

Plans Announced For World's Poultry Congress

CHICAGO — Robert L. Hogue, executive secretary of the Indiana State Poultry Assn., has been appointed to the U.S. committee of the World's Poultry Congress in Mexico City Sept. 21-30.

He will help develop exhibits, promote attendance and help with other arrangements. His appointment was announced by H. H. Alp, American Farm Bureau Federation official and chairman of the U.S. committee.

In the past few years Mr. Hogue has made 10 trips to Mexico, working with various groups in both a personal and an official capacity, according to Dr. J. Holmes Martin, head of the department of poultry science, Purdue University.

Mr. Hogue formerly served as extension poultryman at Purdue, manager of a poultry breeding farm and manager of a chain of feed stores.

The program for the world-wide meeting has been divided into five sections. They are (1) genetics and zootechniques, (2) physiology, nutrition and feed, (3) diseases, disease control, poultry pen construction and equipment, (4) production programs, promotion and poultry industries, and (5) economy and markets.

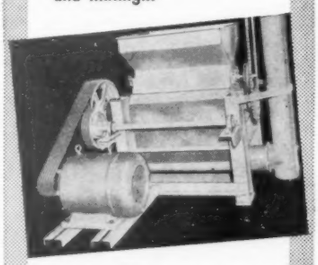
Papers or contributions should be sent through the national committee of the originator's own country. Dr. E. M. Funk, head of the poultry department at the University of Missouri, is in charge of papers for the American committee. He may be reached at the University of Missouri, Columbia, Mo.

If a contributor is in a country with no national committee, he may send his work direct to the organizing committee in Mexico City. That committee will decide on the acceptability of the paper. Otherwise, national committees will decide on the acceptability of the papers.

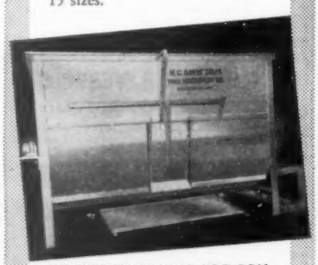
All contributions must be in the hands of the Congress before July 1. Correspondence should be addressed to Comite Organizador del XI Congreso Mundial de Avicultura, Subsecretaria de Ganaderia, Tacuba No. 7, Mexico D. F., Mexico.

FORMULA FOR PROFITS

Almost **FANTASTIC PROFITS** are being made in grain rolling and mixing...



Example: $30.00 per hour with this Giant Krimper-Kracker®... and as much as $10.00 per hour with our little 10x10″ mill. 15 sizes.



PRECISION MIXING FOR DRY AND LIQUID MOLASSES FEED MIXING

- 100 pound to 8000 pound sizes
- Portable or Stationary Mixers

TODAY you want to figure how much it costs you *not* to have this equipment rather than the price, which happily is most reasonable.

This sweeping change-over to dust-free rolled grains gives you a once-in-a-lifetime fortune making opportunity. Ask about our corn and cob Granulator too!

Come in and see our wonderful new factory; no finer production equipment anywhere.

DAVIS BUILT HCD SINCE 1894 **WRITE** FOR FREE CATALOG TODAY

H. C. DAVIS SONS MFG. CO.

P.O. Box FN185 Bonner Springs, Kansas

MODERN FEED PLANTS

By IBBERSON

T. E. IBBERSON COMPANY
ENGINEERS & CONTRACTORS Since 1881
Minneapolis, Minnesota

I LIKE FEEDSTUFFS

it carries EXTRAS!

. . . industry-wide news, pictures of feed people and industry operations, new and useful products, timely research developments, trends, markets.

The Feed Man's Library

Reader Service Department

Feedstuffs

FEEDS AND FEEDING, 22nd Edition

By Frank B. Morrison and Associates

Feeds and Feeding has again been entirely revised, because of the many discoveries made in nutrition and livestock feeding. In this 22nd edition, particular emphasis is placed on the new developments. The numerous experiments are summarized which have dealt with antibiotic, arsenic and surfactant supplements, and with hormones, including stilbestrol. Full information is given concerning requirements of various classes of stock for the vitamins, including B and the unidentified factors. The Appendix Tables are enlarged by 40%, with composition and digestible nutrients of 1,100 feeds **$9.50**

ANIMAL NUTRITION, 4th Edition (1956)

By Leonard A. Maynard

It covers the standard, constantly-needed facts on feeding farm animals, and also the newly discovered facts about how certain acids, minerals, vitamins, etc., can help in raising healthier, more productive animals.
474 pages, 77 illustrations and tables **$7.50**

BEEF CATTLE, 4th Edition

By Roscoe R. Snapp

Covers breeding, feeds, feeding, economic trends, equipment, etc. Includes a report of hundreds of feeding experiments. Has a special chapter on sterility by Dr. Harry Hardenbrooks, Jr., assistant professor of veterinary medicine, University of Illinois. 641 pages **$6.50**

USE OF ANTIBIOTICS IN AGRICULTURE (1956)

Proceedings of the First National Conference

Held under the Auspices of the Agricultural Board and the Agricultural Research Institute, National Academy of Sciences, National Research Council, Oct. 19-21, 1955. Foreword by L. A. Maynard, chapters are sessions, presided over by C. F. Huffman, Damon Catron, H. D. Branion, J. G. Horsfall and W. W. Spink. A collection of scientific papers and panel discussions by leaders in the field **$2.50**

RAISING LIVESTOCK

By Walter H. Peters and G. P. Deyoe

This book provides the owner, manager or caretaker of farm or ranch with easily found, specific suggestions for solving problems confronted in producing, handling and managing livestock, including preparing for market, selecting, feeding, housing, breeding and marketing influences. It tells of the many jobs to be done and exactly how to do them. 519 pages, 240 illustrations..... **$7.50**

DAIRY CATTLE FEEDING and MANAGEMENT, 4th Edition

By H. O. Henderson and Paul M. Reaves

Based on the original work by Carl W. Larson and Fred S. Putney. Expanded 10%, the Fourth Edition adds new chapters on minerals and vitamins, and much recent material on hay-crop silage, grass land farming, dairy cattle health programs, and digestion in the rumen and milk secretion. Designed for use profitably by the student and the practicing dairyman. 614 pages..... **$6.50**

DAIRY CATTLE—Selection, Feeding and Management, 4th Edition (1955)

By W. W. Yapp and W. B. Nevens, Agricultural Experiment Station, University of Illinois

Part 1—Dairy Farming; Part 2—Selection and Breeding; Part 3—Feeding; Part 4—Managing; Part 5—Financial Aspects; Part 6—Milk Secretion; Care and Merchandising; Part 7—Producing Roughages; Part 8—Providing Good Buildings; Part 9—The Future of Dairying. A recognized text of great value to all engaged in dairying, especially to students..... **$4.75**

SWINE SCIENCE, 2nd Edition (1957)

By M. E. Ensminger, Ph.D., State College of Washington, Head Department of Animal Science

A complete yet easily understood reference for swine feeders, breeders and those in auxiliary services to them. Covers history and development of the industry, its distribution, adaptation and future; types and breeds, establishing the herd, meat type breeds, selection and judging, breeding, feeding, grains and high energy feeds, protein, vitamin and milling by-product feeds, pastures, buildings and equipment, health and disease prevention, marketing and slaughter, management and showing. 543 pages, 192 illustrations..... **$5.00**

SWINE FEEDING AND NUTRITION (1957)

By T. J. Cunha, Department of Animal Husbandry and Nutrition, University of Florida

A new text for feeders, teachers of animal husbandry and their classes, county agents, nutritionists and workers in veterinary pharmaceuticals. Dr. Cunha is head of the Department of Animal Husbandry, a member of the Nutrition Committee of the American Society of Animal Production and the Swine Nutrient Requirements Committee of the National Research Council. The book includes reports on the most recent scientific feeding studies on swine.
300 pages, 47 tables, 46 illustrations **$5.00**

SWINE PRODUCTION, 2nd Edition (1956)

By W. E. Carroll and J. L. Krider

A guide to organization, establishment, management, feeding and marketing operations in raising of hogs. 498 pages, 65 illustrations..... **$6.50**

RAISING SWINE—

By George P. Deyoe

A practical swine raiser's handbook. Stock selection, record keeping, feeding, care and handling, marketing techniques and preparing pork for home use. 447 pages, 201 illustrations, 40 tables **$6.25**

THE HANDBOOK OF FEEDSTUFFS (1957)

By Rudolph Seiden and W. H. Pfander

An encyclopedic presentation of production, formulation and medication. Designed to increase feed efficiency, explaining thousands of terms. Valuable to ranches and farms in production of feeds from right crops, utilization of plant as pasture, silage, hay, etc., and as an officially recognized feed product (meal, bran, grit, cake, etc.). Explanations and practical advice on medicated feeds, mineral feedstuffs, trace elements, growth stimulants and chemicals of importance to stockmen and poultry growers. Useful to feed manufacturers, nutritionists, students of animal biology, etc. 600 pages, 175 illustrations, cloth binding **$8.00**

THE STOCKMAN'S HANDBOOK (1956)

By M. E. Ensminger, M.S., M.A., Ph.D.

Intended for stockmen, those who counsel with stockmen and for teachers in animal agriculture. First 120 pages particularly of interest to feed trade, as breeding and feeding of livestock are covered. Other chapters have to do with judging, management, marketing, etc. The 1956 edition is the fourth printing, indicating strong demand for this guide. 598 pages, well illustrated, many tables. A practical handbook **$8.50**

MANAGING FOR GREATER RETURNS in Country Elevator and Retail Farm Supply Businesses

By Richard Phillips, Iowa State College economist

Written as a basic reference book for elevator and farm store managers, this book includes valuable information on over-all planning and management. Some of the topics included are planning for maximum business efficiency, use of an effective accounting system, increasing employee productivity, improving customer relations, improving purchasing, management of credit and operation of custom services. 500 pages **$7.00**

SCIENTIFIC FEEDING OF CHICKENS (1955)

By Dr. H. W. Titus

A small but absolutely authentic and concise treatment of vital information for feeders and feed manufacturers. 43 formulas for diets and mashes, vitamin content of over 60 feedstuffs; what feedstuffs are best, deficiency diseases; also relationship between feed consumption and egg production.
297 pages, hard binding **$4.00**

THE GRAIN TRADE: How It Works (1956)

By James S. Schonberg, Vice President, Uhlmann Grain Company

A comprehensive book on the mechanics of merchandising and trading in cash and grain futures in the U.S. and Canada. Tells of what happens to grain following its purchase from the farmer, how it is graded, stored and conditioned, the establishing of price even before the crop is planted, the role of the university professor in the grain trade. This authoritative book will become the leading reference book on this subject for farmers, county agents, legislators, foreign buyers, government personnel, teachers, etc. **$6.00**

FEEDING POULTRY, 2nd Edition

By Gustave F. Heuser, Professor, New York State College of Agriculture, and the School of Nutrition

Meets the needs of poultry producers, feed dealers and poultry students for the latest authoritative information on how to raise the best poultry by employing modern feeding methods. It evaluates findings on the value of feeds, types of feed to be used and nutritive economy. Deals with feeding and management for various purposes, chicks, breeders and egg producers. 632 pages..... **$7.95**

POULTRY NUTRITION, 4th Edition Revised and Enlarged

By W. Ray Ewing

1,500 pages, 133 illustrations, of practical, factual information for feed manufacturers, feed dealers, hatcherymen, breeders. New chapter on antibiotics, new growth charts, feed formulas for rapid growth..... **$12.50**

POULTRY HUSBANDRY, 3rd Edition

By Morley A. Jull

526 pages, 254 illustrations, covers all aspects of the poultry business, from planning and building poultry plant to preparing poultry products for market. Breeding techniques, feeding procedures, disease control, incubation; it is an "encyclopedia" of poultry raising..... **$6.50**

POULTRY PRODUCTION—

By Leslie E. Card, Ph.D.

Eighth Edition, 416 pages, 216 illustrations and four plates. Deals with broiler production, flock management and marketing, breeding and selection, nutrition, disease control, etc. **$5.00**

HATCHERY OPERATION AND MANAGEMENT

By Ernest F. Funk and M. Richard Irwin

New, 1955; a practical guide to hatchery operation for the experienced and inexperienced. Covers all phases of the business, including advertising, selling, office procedures, labor costs, equipment, chick selection, sexing, etc. 350 pages, well illustrated **$7.00**

SUCCESSFUL POULTRY MANAGEMENT, 2nd Edition

By Morley A. Jull

447 pages, 188 illustrations, based on practical experience, brings practical helps for choosing breeds, increasing broiler and egg production, building range shelters, estimating egg output, buying feed, candling eggs, etc. **$5.75**

KEEPING CHICKENS IN CAGES, 4th Edition (1956)

By Roland C. Hartman, Editor Pacific Poultryman and Dale F. King, Dept. of Poultry Husbandry, Alabama Polytechnic Institute

A thorough revision of this reliable work on cage laying plants. Newly illustrated and broadened in scope with addition of Professor Dale F. King as co-author. More about feeding-results of experiments with caged layers. The importance of protein and energy levels for the highly bred producing stock. 304 pages, 176 illustrations, cloth bound **$5.00**

TURKEY MANAGEMENT, 6th Edition (1955)

By Stanley J. Marsden and J. Holmes Martin

A text on turkey raising and marketing by Stanley J. Marsden, Poultry Husbandman at the U.S. Research Center, Beltsville, Md., and J. Holmes Martin, Head of the Poultry Department, Purdue University. Covers breeding, rearing, feeding, preparation for the market, shows, diseases and their prevention and control. 1,000 pages, 124 illustrations **$7.00**

THE FEED MIXERS HANDBOOK, 2nd Edition (1956)

By Ross M. Sherwood

A text for feed mixers with special reference to the nutritional aspects of feed formulation. A practical handbook for practical men.
206 pages, cloth bound **$3.00**

No C. O. D.'s

ORDER FROM

Reader Service Department
Feedstuffs
P.O. Box 67
Minneapolis 1, Minn.

LEGISLATION

(Continued from page 1)

with its chairman, Sen. Allen J. Ellender, to start a series of hearings, commodity by commodity, as the basis for new farm legislation.

The best that can be hoped for in the Senate at this time is the outlook that the upper chamber will eventually bring out some relief measure for the cotton economy in the form of increased acreage allotments for 1959 cotton crop.

It is the almost unanimous opinion here throughout Congress and in administration circles that cotton has got to have some relief if the U.S. cotton producers are not going to lose their export markets through a shortage of U.S. cotton, now imminent unless the strangling controls on cotton acreage are not lifted next year.

Feed Grain Bill

The so-called feed grain bill, tentatively poised by the House Agriculture Committee for introduction, finds little general favor except for those special interests whose views have been incorporated in a composite document which would be all things to all farmers.

It has no strong or influential support at USDA.

That agency has expressed no formal opinion on the measure since it has not yet appeared officially before the House Agriculture Committee.

Congressional sources, commenting on legislative conditions on the farm front, express the opinion that the attitude of the House Agriculture Committee is outrageous.

It is said that ranking members of the House committee majority openly admit that it is their express intention to load down their contemplated omnibus measure with provisions which are totally objectionable to Ezra Taft Benson, secretary of agriculture, and the administration, thereby inviting another White House veto.

The failure of the completely noncontroversial wool bill to get House action is because it is held as a hostage by the Democratic majority, which hopes to squeeze out concessions from the Republicans and some recalcitrant members of their own party.

House committee leaders speak regularly about an omnibus measure stemming from the House Agriculture Committee, but it is known privately that the committee is by no means in agreement with its leader—and this type of obstructionist tactics on the part of the majority leaders may readily cast some doubt on their sincerity as protectors of the farmer interests.

At least it might be expected that the wool growers might find the use of their legislative requirement as a hostage is something less than what would ordinarily be sensed as protection of the farmer.

Record Attendance at Dry Milk Meeting

CHICAGO—More than 800 delegates, a new record, attended the 33rd annual meeting of the American Dry Milk Institute at the Edgewater Beach Hotel here April 17-18.

Convention reports show that total domestic consumption of dry milk in 1957 increased 12.8% over the previous year, while production increased 10%.

New officers elected at the annual meeting are E. A. Pool, Dairymens Cooperative Assn., Syracuse, N.Y., chairman; H. S. Wagner, Pet Milk Co., St. Louis, vice chairman, and M. R. DeBaets, Bowman Dairy Co., Chicago, secretary-treasurer.

Animal feed utilization of dry milk in 1957 accounted for 5.5% of total production, down .2% from the preceding year.

Weekly Average Prices and Index Numbers

Compiled by U.S. Department of Agriculture—Base Period 1947-49=100
(All prices of feeds and grains in dollars per ton)

	5-year average 1951-55	April 8, 1958	April 15, 1958	Change from previous week	Per cent April 15 is of 5-year average
OILSEED MEALS—					
Prices at principal markets:					
Soybean meal	85.30	74.85	78.10	+3.25	92
Cottonseed meal	74.25	65.50	65.80	+ .30	89
Linseed meal	73.35	62.25	63.50	+1.25	87
Copra cake or meal	73.00	55.25	56.00	+ .75	77
Peanut meal	75.15	65.75	65.75	..	87
Index of weighted prices	99.9	87.4	90.2	+2.8	..
ANIMAL PROTEIN FEEDS—					
Prices at principal markets:					
Meat meal	94.60	106.60	105.90	— .70	112
Tankage	96.35	115.15	114.50	— .65	119
Fish meal	139.40	135.00	135.85	+ .85	97
Index of weighted prices	88.1	95.5	95.3	— .2	..
GRAIN HIGH-PROTEIN FEEDS—					
Prices at principal markets:					
Gluten feed and meal	63.05	58.15	58.15	..	92
Distillers dried grains	68.80	59.10	60.10	+1.00	87
Brewers dried grains	56.15	50.60	50.80	+ .20	90
Index of weighted prices	89.3	81.0	81.3	+ .3	..
WHEAT MILLFEEDS—					
Prices at principal markets:					
Bran	53.40	45.70	47.95	+2.25	90
Middlings and shorts	56.45	46.40	50.50	+4.10	89
Index of weighted prices	90.4	75.9	81.1	+5.2	..
OTHER MILLFEEDS—					
Prices at principal markets:					
Hominy feed	61.15	49.45	51.40	+1.95	84
Rice bran	39.30	32.00	32.50	+ .50	83
Index of weighted prices	84.5	68.4	70.9	+2.5	..
ALFALFA MEAL—					
Prices at principal markets	59.75	50.25	50.10	— .15	84
Index of weighted prices	105.8	88.9	88.7	— .2	..
MOLASSES, FEEDING—					
Prices at principal markets	27.85	28.62	29.08	+ .46	104
Index of weighted prices	82.9	85.2	86.5	+1.3	..
ALL FEEDSTUFFS—					
Index of weighted prices	94.0	84.3	86.8	+2.5	..
FEED GRAINS—					
Prices at principal markets:					
Corn	55.00	42.00	44.10	+2.10	80
Oats	51.90	44.20	43.90	— .30	85
Barley	52.50	42.80	43.20	+ .40	82
Grain sorghums	53.60	44.20	45.80	+1.60	85
Index of weighted prices	87.7	68.4	71.1	+2.7	..

Honeggers' Announces Record Sales, Profit

FAIRBURY, ILL.—Sales and profits of Honeggers' & Co., Fairbury, for the nine months of the current fiscal period are at an all-time high, it was reported by Sam R. Honegger, head of the firm.

He said equipment sales were up sharply and that a backlog of farm building sales now exceeds $200,000. Total sales exceed $8 million for the nine-month period, according to Mr. Honegger.

"Contrary to the downward trend in many businesses," he pointed out, "this will be our biggest and best year."

The firm also announced a general wage increase of 5¢ an hour now and another 5¢ effective June 30 for all mill and factory workers in all plants.

The company operates feed mills at Fairbury and Indianola, Iowa; a manufacturing plant for prefabricated farm buildings at Onawa, Iowa, and a metal fabricating plant, which makes livestock and poultry equipment, metal grain bins and bulk feed storage tanks, at Taylorville, Ill.

The announcement also stated that plant foremen in all locations are receiving a $10-a-month salary increase now and another $10 increase effective July 1.

The firm's board of directors declared a dividend of 40¢ a share, payable in common stock of the company on May 15, to stockholders of record April 30.

Western Union Marks 90th Year of Ticker

NEW YORK—The Western Union quotation ticker, a vital link in the business and finance world, observes its 90th birthday April 21, the telegraph company has announced.

The ticker, which was invented by Edward A. Calahan, a Western Union employe, in 1868, now flashes the buying and selling prices of stocks, bonds and commodities nationwide from the country's principal exchanges. The Western Union ticker reports transactions amounting to more than $50 million annually.

Midwest Corn Shipped By Barge to Georgia

BAINBRIDGE, GA.—The first shipment of corn to arrive at the Flint River Mill, Bainbridge, by barge was delivered recently. The shipment consisted of 42,623 bu. of yellow corn from Peoria, Ill., mill officials said, and added that future plans call for increased shipments of grain, soybean meal and other feed materials by barge when local supplies "become unavailable or scarce."

"Until additional storage facilities can be built, the grain will be hauled directly to the feed mill as the barges are unloaded," L. F. Turknett, mill superintendent, explained.

"We will continue to use all the feed materials we can purchase locally," a mill official declared, "but we will import other grain by barge when this supply is exhausted."

Use of the Flint River for commercial freight traffic has been made possible by the construction of the Jim Woodruff Dam as part of a program to open the Chattahoochee River and its tributaries to navigation from the Gulf of Mexico to Atlanta and intermediate areas adjacent to the waterway.

Broiler Pullet Chick Placements Up 23%

WASHINGTON—A 23% increase in the indicated placement of pullet chicks for broiler hatchery supply flocks during March by 10 of the largest primary breeders of broiler replacement stock has been reported by the U.S. Department of Agriculture. The indicated total was 3,118,000 chicks during the month, compared with 2,538,000 in March a year ago.

In addition, pullet chick placements by these 10 breeders during the first three months of 1958 totaled 7,370,000, which was 15% more than the same period last year. These 10 breeders account for a large percentage of the total supply provided, USDA indicated, thus giving an indication of the potential number of pullets available for addition to hatchery egg supply flocks several months before the pullets will actually move into the flocks.

CATTLE

(Continued from page 1)

was down 9% in numbers from April 1 a year ago, Texas was up 43%, Colorado up 4%, Arizona up 17% and Idaho up 10%.

The 13 states as a whole placed 28% more cattle and calves on feed for the January-March quarter this year, compared to a like period last year. But fed cattle marketed from these same states the first quarter of this year were 8% fewer than the same quarter in 1957. The number of short-fed cattle (both placed and marketed during the quarter) was 147,000—35% above the corresponding period last year.

Marketing intentions reported by the 13 states on April 1 indicated that 58% of cattle on feed April 1, will be marketed after July 1. Of the remaining 42%, 13% were expected to be marketed in April, 14% in May and 15% in June.

The 13-state report also showed that steers represented 61% of the total on feed April 1, about the same as a year ago. There was no more than a 1% change with heifers and calves, either, with heifers making up 21% and calves 17%. Cows and other cattle made up 1% of the total this year, compared with less than one half of 1% a year earlier. Considerably more light weight cattle were on feed as of April 1 this year than the same period a year ago, but there were relatively fewer heavy cattle in feed lots.

Cattle and Calves on Feed, Selected States*

State:	Jan. 1, 1958	April 1 1957	April 1 1958	1958 as % of '57
	1,000 head			%
Ohio	176	161	158	98
Indiana	287	269	242	90
Illinois	649	610	628	103
Minnesota	367	345	386	112
Iowa	1,284	1,265	1,404	111
Missouri	292	227	275	121
So. Dakota	266	180	243	135
Nebraska	543	483	613	127
Kansas	180	100	175	175
Nine states	4,044	3,640	4,124	113
Texas	115	72	103	143
Colorado	251	222	231	104
Arizona	190	140	164	117
California	393	301	274	91
13 states	4,993	4,375	4,896	112
Oklahoma	41	**	32	**
Idaho	114	100	110	110
Michigan	110	**	**	92
Wisconsin	115	**	**	98

*Estimates include only cattle being fattened for market as a more or less distinct agricultural enterprise, and exclude small operations incidental to dairy and general farming. Cattle thus fed are presumed to produce carcasses that will grade good or better. **Not available.

BROILERS

(Continued from page 1)

shipped last week also totaled 6% more than the corresponding week in 1957.

(Meanwhile, daily market reports showed that on April 16, broilers and fryers in Arkansas were averaging from 18 to 19¢ lb.; the Delmarva area price was 19 to 19.5¢ lb., and Georgia's was 18 to 18.5¢ lb.)

Nationwide, last week's chick-placement and egg-set figures show a similar expanding of the industry. Broiler growers in 22 reporting states placed 32,587,000 broiler chicks. This was 5% more than the previous week and 17% above the corresponding week a year ago. Seventeen of the 22 states reported higher placements compared to the previous week. Especially large increases occurred in Georgia and Mississippi.

The hatcherymen in the 22 states set 46,099,000 eggs last week. This was nearly the same as the previous week but 17% above the corresponding week a year ago. Increases in the number of eggs set from the previous week were reported in 14 of the 22 states. Most of the increases were relatively small; none exceeded 100,000 eggs.

THE FEED MARKETS

★ ★ ★ ★

Demand — Supply — Trends — Prices

Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

A AND D FEEDING OIL

Boston: Demand light; supply good: 600 D, 1,500 A 18¢ lb.; 300 D, 2,250 A 18½¢; 300 D, 1,500 A 17¢; 300 D, 750 A 15½¢.

Seattle: Demand slow; trend steady; supply good; 300 D, 2,250 A 22¢ lb., 300 D, 1,500 A 19¢ lb., 300 D, 750 A 17¢ lb., all ex-warehouse, drums included.

Chicago: Demand fair; supply adequate; straight A feeding oil with 10,000 units vitamin A per gram 7½@8½¢ a million units of vitamin A, l.c.l., packed in 55 gal. drums, f.o.b. Chicago, drums included.

New York: Trend steady; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 13½@15½¢, 1,500 A 15½@17¢, 2,250 A 17½@20¢, 3,000 A 19½@21¢; 600 ICU, 1,500 A 16@18¢, 2,250 A 18@19½¢, 3,000 A 20@21¢; f.o.b. Massachusetts, New York or Pennsylvania.

Denver: Demand fair; trend unchanged; supply ample; 2,250 A, 300 D 22½¢ lb.

Minneapolis: 10,000 A 35¢ lb.; 300 D, 2,250 A 21½¢ lb.; 300 D, 1,500 A 20½¢ lb.; 300 D, 75 A 18½¢ lb.

ALFALFA MEAL

Boston: Demand steady; supply adequate; dehydrated, 17% $60.50; suncured, 13%, pellets $48.

Buffalo: Demand and supply fair; trend steady; $61.50, sacked, Boston.

Los Angeles: Demand slow; trend steady; supply ample; dehydrated pellet meal, 17% protein, 100,000 A $48@49; dehydrated meal, 17% protein, 100,000 A $46; suncured crumbles, 15% protein $45@46; suncured meal, 15% protein $43@44.

Seattle: Demand slow; trend steady; supply good; 15% protein suncured $40, delivered, carlots; 136,000 A unit dehydrated $67, delivered, carlots.

Philadelphia: Demand dull; trend unsettled; supply light; 17% dehydrated $59.50.

Omaha: Demand poor; 17%, 100,000 A vitamin bulk pellets $37, Omaha; sacked meal $41, Omaha; non-A guarantee $36, Omaha, sacked.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $53.20@58.20.

St. Louis: Demand slow; trend steady; supply ample; 17% fine suncured $40; 17% dehydrated, 100,000 units vitamin A $48.

Ft. Worth: Demand good; supply adequate on dehydrated, light on suncured; Kansas dehydrated, 17%, 100,000 A $46 by truck, $51.50 by rail; suncured No. 1 13% protein, ¼-in. grind, truck $38.

Kansas City: Demand fair to good; trend steady; limited amount of processed meal available from mills other than blenders, pellets plentiful; dehydrated alfalfa meal with 17% protein and 100,000 units vitamin A guaranteed on arrival $41@43, sacked; 18% protein 125,000 A meal $48, sacked; 17% protein 100,000 A pellets $36@38, bulk; non-guaranteed A meal $36, sacked; suncured alfalfa meal in poor demand, supplies adequate for demand, No. 1 fine ground 13% protein $34.50, 15% protein $37.50, No. 1 ¼-in. $33.50, No. 2 ¼-in. $29.50, sacked.

New Orleans: Demand fair; trend steady; supply adequate; 17% dehydrated, vitamin A guaranteed $55@55.50; pellets, bulk $50@50.50.

Chicago: Demand slow; supply adequate; 17% dehydrated, with 100,000 units vitamin A guaranteed $47@47.50; 17% with no A guaranteed $43@43.50.

Portland: Demand slow; supply ample; trend unchanged; suncured $38.50; dehydrated $51, f.o.b. California.

Denver: Demand fair; trend steady; supply ample; 100,000 A, 17% $43.

Memphis: Demand fair; trend lower; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $47.

Minneapolis: Steady to easier trend; good demand; supplies getting tight; 17% re-ground pellets, 100,000 units A $47.25@48, sacked; $44.25@45 bulk; granules and oil treated, bulk $46.25@47.

ANIMAL FATS (STABILIZED)

Chicago: Demand fair; supply short; bleachable fancy tallow, tank truck or carlots 7⅝@7¾¢ lb.; yellow grease 7@7¼¢ lb.

New Orleans: Demand fair; trend steady; supply adequate; bleachable 8¼@8½¢ lb.

Kansas City: Demand good; trend steady; supply tight; bleachable fancy tallow 8¼¢ lb., tank car.

Ft. Worth: Demand good; supply light; prime tallow, tank cars 8⅝¢ lb.; drums 10¼¢ lb., f.o.b. north Texas packing plants with returnable drums.

Louisville: Demand fair; trend steady; supply good; bleachable fancy 8⅛¢ lb.; white tallow 8¼¢ lb.; yellow grease 6⅝¢ lb.

Denver: Demand fair; trend soft; supply short; bleachable fancy 7½¢ lb.

St. Paul: Trend steady; little export and domestic demand left, national market dull, local demand good; supply ample; 7⅝¢ lb., f.o.b. producers' points for bleachable fancy tallow.

FEED BARLEY

Philadelphia: Demand slow; supply fair; pulverized $44.75.

Seattle: Demand fair; trend firmer; supply good; whole barley $57, ground barley $57, rolled barley $59, all ex-warehouse, l.c.l., sacked.

Ogden: Supply average; rolled $41@45; whole barley $34@39.

Boston: Demand slow; supply light; $45.

Los Angeles: Demand fair; trend steady; supply ample; standard rolled $2.98 cwt., sacked; standard ground $2.98 cwt., sacked.

New Orleans: Demand slow; trend steady; supply light; ground $66@67.

Chicago: Demand good; supply light; $38.

Baltimore: Demand good; supply light; $49.

Milwaukee: Demand good; supply fair; needles 91¢@$1.14; ground $26.50, sacked.

Portland: Demand slow; supply ample; trend unchanged; rolled $59, ground $56.

BENTONITE (SODIUM)

Cincinnati: Demand steady; supply adequate; f.o.b. Cincinnati, minimum 30-ton carlots: 80 granular $30.21; 200 mesh fine $29.96.

Chicago: Demand steady; supply adequate; f.o.b. Wyoming and South Dakota shipping points; granular 30 mesh $16.50; fine granular, 80 to 100 mesh $13.75; powder, 200 mesh $13.50; f.o.b. Belle Fourche, S.D., minimum 30-ton carlots; 80 granular $13.50 net; 200 mesh fine $13.25 net.

Denver: Demand fair; trend unchanged; supply ample; 200 mesh $13.50, f.o.b. Wyoming and South Dakota shipping points.

BLOOD FLOUR

Louisville: Demand fair; trend steady; supply good; $100@120.

BLOOD MEAL

Louisville: Demand fair; trend firm; supply ample; $100@110.

Chicago: Demand slow; supply limited; $150@155, guaranteed 80% protein.

Portland: Demand good; supply ample; trend unchanged; $110.

Los Angeles: Demand good; trend firm; supply very limted; $7.50 a unit of ammonia.

Ogden: Supply average; $125 in 100-lb. bags, f.o.b. Ogden.

New Orleans: Demand good; trend steady; supply light; $105@110.

Denver: Demand slow; trend off sharply; supply ample; $117.50.

BONE MEAL (STEAMED)

Ft. Worth: Demand fair; supply adequate; $85, f.o.b. Ft. Worth, local manufacture.

Seattle: Demand and trend steady; supply good; $85, ex-dock, truck lots.

Boston: Demand and supply steady; $87.

Cincinnati: Demand fair; trend steady; supply short; $95, sacked, f.o.b. Cincinnati.

New Orleans: Demand fair; trend steady; supply ample; $85@95.

Buffalo: Demand good; trend steady; supply ample; $90, sacked.

Los Angeles: Demand slow; trend steady; supply adequate; imported $66.50 in 20-ton lots.

Louisville: Demand good; trend steady; supply normal; $85@90.

Chicago: Demand good; supply tight; $80@85.

Portland: Demand slow; supply ample; trend unchanged; $95.

Denver: Demand fair; trend unchanged; supply ample; $75, f.o.b. West Coast.

BREWERS DRIED GRAINS

Cincinnati: Demand poor; trend steady; supply adequate; $52.

Buffalo: Demand and supply fair; trend steady to higher; $53.50, bulk, Boston.

Philadelphia: Demand slow; supply light; $58.

Milwaukee: Demand good; supply fair; $46.50.

Los Angeles: Demand and trend steady; supply limited; $49 bulk, $53 sacked.

Ft. Worth: Demand slow; supply moderate; 26% $50.15, delivered Ft. Worth.

Chicago: Demand fair; supply adequate; 26% $46@47.

Boston: Demand active; supply adequate; Canadian, 26% $57@58; domestic, 22% $51.

St. Louis: Demand good; trend higher; supply short; $48.

New Orleans: Demand fair; trend easier; supply adequate; $56.50@57.80.

Louisville: Demand fair; trend weak; supply good; $46.

BREWERS DRIED YEAST

Buffalo: Demand good; trend steady; supply ample; $10.25 cwt.

Seattle: Demand slow; trend steady; supply ample; $12 cwt.

Boston: Demand and supply steady; 11¢ lb.

Los Angeles: Demand and trend steady; supply adequate; 10¢ lb. in 5-ton lots; 11¢ lb. in less than 5-ton lots.

Omaha: Demand steady; 11½¢ lb., Omaha.

Chicago: Demand good; supply limited; 10@11½¢ lb. in carlots; 10¼@12½¢ lb., l.c.l.

Louisville: Demand fair; trend steady; supply good; 10@10½¢ lb.

Portland: Demand good; supply ample; trend unchanged; 8½¢ lb.

Denver: Demand fair; trend unchanged; supply ample; $10 cwt.

St. Louis: Demand good; supply limited; 10¢ lb. in carlots; 11¢ lb. in ton lots; 12¢ lb. in less than ton lots.

Cincinnati: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

Pittsburgh: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New Orleans: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New York: Carlots 9½¢ lb.; 10-ton lots 10¢ lb.; 5-ton lots 10½¢ lb., ton lots 11¢ lb., f.o.b. New Jersey.

Milwaukee: Demand good; supply limited; 10½@11½¢ lb. in carlots; 10⅝@12½¢ lb., l.c.l.

BUTTERMILK-CONDENSED

Los Angeles: Demand and trend steady; supply adequate; 5¼¢ lb. in 100-lb. lots; 4¼¢ lb. in 500-lb. lots.

Ogden: Supply average; $4.40, 100-lb. drum.

Philadelphia: Demand dull; supply fair; $4.25 cwt.

New Orleans: Demand slow; trend steady to easier; supply light; $3.50@4 cwt.

Boston: Demand slow; supply light; 3½¢ lb.

Chicago: Demand slow; supply adequate; $3.25@3.50 cwt. in carlots.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight and tax)

New York: Crystals $15.30, flour $10.30.
Buffalo: Crystals $16.16, flour $11.16.
Toledo: Crystals $18.06, flour $13.06.
Boston: Crystals $16.69, flour $11.69.
Limecrest, N.J.: Crystals $10.50, flour $5.50.

CALCIUM CARBONATE

Cincinnati: Demand fair; trend steady; supply adequate; $8@9 cwt.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, truck lots.

Los Angeles: Demand slow; trend steady; supply ample; $10.25.

Chicago: Demand steady; supply adequate; fine grind, plain $9.76; bulk, in hopper cars $7.67; bulk in boxcars $8.17; granular grind $1 premium.

Minneapolis: Fine grind: 50-lb. bag $12.25, 100-lb. bag $11.50; bulk, box car $10; bulk, hopper $9.50; coarse grind $1 premium, delivered Minneapolis.

CHARCOAL

Los Angeles: Demand slow; trend unchanged; supply ample; hardwood poultry $156 sacked in less than ton lots, $144.50 sacked in ton lots.

Cincinnati: Demand good; trend steady; supply adequate; briquets $120, 25-lb. bags, f.o.b. warehouse, Cincinnati.

Boston: Demand and supply light; $95, nominal.

Chicago: Demand quiet; supply adequate; poultry charcoal $106 ton in 50-lb. multiwalls.

COCONUT MEAL

Los Angeles: Demand fair; trend firmer; supply adequate; copra cake $58@60.

Seattle: Demand and trend steady; supply ample; $62, ex-dock, truck lots.

Portland: Demand slow; supply ample; trend unchanged; $59.

COD LIVER OIL (FORTIFIED)

Boston: Demand fair; supply good; 600 D, 2,250 A 21¢ lb.; 300 D, 2,250 A 20¢ lb.; 300 D, 1,500 A 17½¢ lb.

New York: Trend steady; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 14½@15½¢, 1,500 A 16½@20¢, 2,250 A 18½@21¢, 3,000 A 21½@23¢; 600 ICU, 1,500 A 17½@19½¢, 2,250 A 20@22¢, 3,000 A 22@23¢; f.o.b. Massachusetts, New York or Pennsylvania.

CONDENSED FISH SOLUBLES

Boston: Demand good; supply short; 5¢ lb., nominal.

New Orleans: Demand fair; trend firm; supply light; 50% solids menhaden $100, f.o.b. Gulf.

Los Angeles: Demand steady; trend firm; supply limited; 5¼@5½¢ lb.

New York: Demand good; trend steady; supply fair; 5@5¼¢ lb., f.o.b. eastern shore.

Denver: Demand fair; trend steady; supply light; $192.25, dried.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis, bulk basis $5 less)

Minneapolis: Feed $56.80, meal $86.80.
Atlanta: Feed $62.98, meal $92.98.
Birmingham: Feed $61.64, meal $91.64.
Boston: Feed $61.84, meal $91.84.
Chicago: Feed $50, meal $80.
Cleveland: Feed $58.14, meal $88.14.
Denver: Feed $60.51, meal $90.51.
Ft. Worth: Feed $58.96, meal $88.96.
Indianapolis: Feed $55.36, meal $85.36.
Kansas City: Feed $50, meal $80.
Louisville: Feed $57.21, meal $87.21.
New Orleans: Feed $60.20, meal $90.20.
New York: Feed $61.43, meal $91.43.
Norfolk: Feed $60.71, meal $90.71.
Philadelphia: Feed $61.02, meal $91.02.
Pittsburgh: Feed $58.96, meal $88.96.
St. Louis: Feed $50, meal $80.

CORN OIL MEAL

Louisville: Demand slow; trend strong; supply normal; up $2 ton; $59.68.

COTTONSEED OIL MEAL

Wichita: Demand slow; supply ample; 41% old process $67.

Boston: Demand and supply fair; $82.

New Orleans: Demand fair; trend steady; supply adequate; 41% old process $78@81.

St. Louis: Demand slow; trend steady; supply limited; $67.

Seattle: Demand fair; trend steady; supply good; $63, delivered, truck lots, 41% expeller process.

Kansas City: Demand fair to good, with a number of mixers having found it economical to switch from soybean to cottonseed meal; trend steady; supply adequate from Texas; old process meal $66@67, sacked, Kansas City from Texas processors; solvent meal $62, sacked, Kansas City from Texas; Memphis basis meal higher priced for this market.

Ogden: Supply normal; 41% $65@70.

Philadelphia: Demand dull; supply fair; $81.50.

Cincinnati: Demand poor; trend steady; supply adequate; solvent $74; old process $75.

Chicago: Demand slow; supply adequate; hydraulic $74.50@75; solvent $73.50@74.

Louisville: Demand slow; trend strong; supply ample; old process $73.50, up $1; new process $72, up 50¢.

Buffalo: Demand poor; trend steady; supply fair; $81.75, sacked, Boston.

Ft. Worth: Demand fair; supply sufficient; carlots, 41% old process $56.50@57.50 f.o.b. central Texas, $58 f.o.b. Ft. Worth area; solvent 41% low gossypol $56@57, delivered Ft. Worth; pellets $2 additional; cottonseed hulls $19, f.o.b. Ft. Worth.

Los Angeles: Demand improved; trend firm; supply tighter; local production, 40% protein $55.

Omaha: Demand fair; supply ample; $60, Omaha basis.

Portland: Demand good; supply ample; trend unchanged; truck $59, rail $69.50.

Denver: Demand fair; trend steady; supply ample; 2% fat, 41% $61, rail.

Memphis: Demand dull; trend steady; supply limited; prime 41% protein, old process $63, sacked; new process, 41% solvent $61.50, sacked.

Atlanta: Demand fair; trend steady; supply limited; 41% $72, sacked, immediate.

CURACAO PHOSPHATE

New York: Trend steady; ground Curacao phosphate in 100-lb. bags $48 ton, f.o.b. cars or trucks, New Orleans, Jacksonville, Fla., or Philadelphia.

D ACTIVATED ANIMAL STEROL, POWDERED

Kansas City: Demand fair; trend steady; supply ample; 1,500 ICU 9½@10¢ lb.; 3,000 ICU 11½@12¢ lb., ton lots or larger.

Cincinnati: Demand fair; trend steady; supply ample; 1,500 ICU 11@12¢ lb.; 3,000 ICU 18¢ lb., warehouse.

New York: Trend steady; price per lb. in 50- and 100-lb. bags or 100-lb. drums: 1,500 ICU 8@12¢ bagged, 12@13¢ drums; 3,000 ICU 13@17¢ bagged, 17@18¢ drums; f.o.b. or delivered basis Pennsylvania, Delaware or New York.

D ACTIVATED PLANT STEROL, POWDERED

Chicago: Demand good; supply moderate; 4,000,000 U.S.P. units per lb., 15¢ lb. in ton lots; less than ton lots 17¢ lb.; 12,000,000 units per lb., 5 tons to a carload 28¢ lb.; ton lots and less 30¢ lb.

DEFLUORINATED PHOSPHATE

Tupelo, Miss.: Minimum phosphorus 13%, minimum calcium 31%, maximum fluorine .12%, $51 net ton, f.o.b. Tupelo in 100-lb. multiwall bags, $48 in bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum calcium 36%, maximum fluorine .18% $69.12 net ton, f.o.b. Wales, in 100-lb. multiwall bags, $3 less in bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $69.50 net ton, f.o.b. Houston, 100-lb. multiwall paper bags; $66.50 in bulk.

Coronet, Fla.: Minimum phosphorus 17%, minimum calcium 34%, maximum fluorine .17%, carload $60, truckload $60.75, net ton, f.o.b. Coronet in 100-lb. multiwall bags, $67 and $67.75 in bulk.

Cincinnati: 18% phosphorus $81, sacked; 13% phosphorus $64.98, sacked, f.o.b. Cincinnati.

DICALCIUM PHOSPHATE

Texas City, Texas: 18.5% minimum phosphorus, 25% minimum calcium, 28% maximum, 0.11% maximum fluorine, granular $77.70 net ton, f.o.b. Texas City in 100-lb. multiwall bags, bulk, boxcars and hoppers, $3 net ton less than bagged material.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum 25% calcium, maximum .01% fluorine guaranteed $83.25, f.o.b. Columbia, in 100-lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Chicago: Stock food grade, 18.5% phosphorus, 20,000 lb. or more $83.25 net ton in 100-lb. papers, basis Chicago Heights, Ill., or Nashville, Tenn.; less than 20,000 lb. $93.25; 21% phosphorus, 20,000 lb. or more, $94.50, basis Chicago Heights and Nashville; less than 20,000 lb. $104.50; bulk boxcars or hoppers $3 net ton less than bagged material.

Bonnie, Fla.: Minimum phosphorus 18½%, granular $83.25; freight equalized with closest producing point, carload basis.

Minneapolis: 18.5% phosphorus, 24% calcium granular or fine ground $94.10, delivered; $3 less in bulk.

Trenton, Mich.: Minimum phosphorus 18½%, maximum fluorine .03% guaranteed $83.25, f.o.b. Trenton in 100-lb. multiwalls; minimum phosphorus 18%, maximum fluorine .03% guaranteed $94.50, f.o.b. Trenton in 100-lb. multiwall bags.

Denver: Demand fair; trend unchanged; supply ample; 18.5% $77.70, f.o.b. Texas City.

Cincinnati: 18½% phosphorus $82@93.

Portland: Demand good; supply ample; trend unchanged; $115.

DISTILLERS DRIED GRAINS

Boston: Demand active; supply tight; Canadian light $64, dark $65@66.

Seattle: Demand fair; trend steady; supply ample; $63, delivered, truck lots.

Cincinnati: Demand fair; trend steady; supply adequate; light $57.50, dark $58; by truck, dark $50.

Philadelphia: Demand slow; supply light; $63.

Buffalo: Demand good; trend steady to higher; supply poor; $62, bulk, Boston, nominal.

New York: Demand and supply good; trend steady; light $56, bulk, Boston; dark $57, bulk, Boston, plus $5 sacked; solubles $82, sacked, Boston.

Louisville: Demand strong; trend strong; supply scarce; bourbon grains: light $53@55, dark $54@56, solubles $77.

DRIED BEET PULP

Milwaukee: Demand and supply fair; molasses $49.50; plain $52.

Buffalo: Demand and supply fair; trend steady to higher; $64.50, sacked, Boston.

Seattle: Demand slow; trend steady; supply good; $43, delivered, carlots.

Ogden: Supply average; $38@42.

New Orleans: Demand slow; trend steady to higher; supply sufficient; $52@58.

Los Angeles: Demand steady; trend firmer; supply tight; molasses $45.50@46.

Ft. Worth: Demand slow; supply sufficient; carlots, 50-lb. papers $58.70, April, delivered Ft. Worth.

Cincinnati: Demand fair; trend steady; supply adequate; $55.

Portland: Demand good; supply ample; trend unchanged; $50.

Atlanta: Demand slow; trend strong; supply limited; $68, sacked, immediate.

Boston: Demand and supply fair; $62@62.50.

DRIED BUTTERMILK

Milwaukee: Demand and supply fair; $10 cwt.

Louisville: Demand fair; trend steady; supply normal; 10½@11¢ lb.

Ogden: Supply average; $7.25, 100-lb. bag.

New Orleans: Demand slow; trend firm; supply adequate; $7.25@8 cwt.

Boston: Demand good; supply tight; 11¢ lb.

Los Angeles: Demand slow; trend steady; supply adequate; 11¢ lb.

Wichita: Demand slow; supply sufficient; $8 cwt.

Buffalo: Demand good; trend firmer; supply limited; $10.95 cwt.

Chicago: Demand good; supply scarce; medium acid $10@10.25; sweet cream, none available.

Minneapolis: Firm trend; good demand; tight supplies; $10 cwt., nominal.

DRIED CITRUS PULP

Boston: Demand spotty; supply fair; $44, f.o.b. Florida points.

New Orleans: Demand fair; trend steady; supply limited; $44@45, Florida points.

Los Angeles: Orange pulp, none available; lemon pulp $37 bulk, $42 sacked.

Buffalo: Demand fair; trend steady; supply adequate; $44, sacked, f.o.b. Florida.

Atlanta: Demand good; trend strong; supply limited; $53, sacked, immediate; meal $44, sacked, immediate.

DRIED SKIM MILK

Philadelphia: Demand dull; supply fair; $12.50 cwt.

New Orleans: Demand good; trend steady; supply limited; $10.50@10.65 cwt.

Cincinnati: Demand fair; trend steady; supply adequate; 10½@11¢ lb.

Los Angeles: Demand and trend steady; supply adequate; 14¢ lb. in less than ton lots; 13¾¢ lb. in ton lots.

Boston: Demand fair; supply tight; 12¢ lb. in carlots.

Milwaukee: Demand and supply fair; $11 cwt.

Buffalo: Demand good; trend steady; supply ample; rolled $11.50 cwt.; spray $10.65 cwt.

Chicago: Demand improved; supply tightening; $10.75 cwt. in carlots.

Ogden: Supply average; $15.15, 100-lb. drum.

Louisville: Demand fair; trend firm; supply normal; 11⅛@12¢ lb.

Portland: Demand good; supply ample; trend unchanged; $13 cwt.

Minneapolis: Steady trend; fair demand; ample supplies; $10.75@11 cwt.

DRIED WHEY

Cincinnati: Demand fair; trend steady; supply adequate; $5.35 cwt.; sweet $5.75 cwt.

New Orleans: Demand fair; trend steady; supply adequate; $6@6.50 cwt.

Ogden: Supply average; $6.90, 100-lb. bag.

Ft. Worth: Demand fair; supply adequate; carlots, standard $6 cwt., sacked, delivered Ft. Worth or any Texas points, or in ton lots, f.o.b. warehouse, Ft. Worth.

Kansas City: Demand fair; trend steady; supply light; $5.10 cwt., f.o.b. producers' points for both regular and partially delactosed.

Chicago: Demand good; supply ample; $5.10, f.o.b. plant.

Boston: Demand steady; supply plentiful; $5.90 in 100's; small lots 6¼¢ lb.

Los Angeles: Demand slow; trend steady; supply adequate; $5.75 cwt. in carloads; $6 cwt. in l.c.l.

Louisville: Demand fair; trend steady; supply normal; 6@6½¢ lb.

Seattle: Demand and trend steady; supply good; $6.25 cwt., ex-warehouse, l.c.l.

Philadelphia: Demand dull; supply fair; $6.25 cwt.

Portland: Demand good; supply ample; trend unchanged; $6.05 cwt.

Denver: Demand fair; trend unchanged; supply ample; $7 cwt., $6.10 carlots.

Minneapolis: Trend unchanged; fair demand; ample supplies; $5.40@5.60 cwt.; other sources quote $5.10 cwt., f.o.b. producers' points for both regular and partially delactosed.

FEATHER MEAL (HYDROLYZED)

Boston: Demand steady; supply light; $85, f.o.b. eastern shipping points.

Ft. Worth: Demand good; supply very limited; $101, f.o.b. trucks, north Texas plants.

Los Angeles: Demand good; trend steady; supply limited; $1.25 a unit of protein.

Salisbury, Md.: Trend firm; strong demand; supply limited; $85, f.o.b. producers' plants.

Atlanta: $94, f.o.b. Alabama and Georgia producing points, immediate.

FISH MEAL

Los Angeles: Demand good; trend steady; light offerings; local production 60% protein $2.37½@2.40 a unit of protein.

Boston: Demand and supply steady; $133.

Buffalo: Demand good; trend stronger; supply limited; 60% protein, menhaden, $142 bulk, $147 sacked.

New Orleans: Demand light; trend steady; supply limited; Angola 60% $135, burlaps; mixed meal, Peru $135, burlaps.

Ft. Worth: Demand fair; limited offerings for immediate; Peruvian 65% protein $145, ex-dock Houston, immediate delivery; 60% Angola $145, late April.

Seattle: Demand fair; trend firm; supply limited; $2.40 a unit protein, f.o.b. truck, Vancouver, B.C.

Cincinnati: Demand poor; trend steady; supply adequate; $135@140.

Ogden: Supply normal; $2.20 a unit, f.o.b. Coast; 65% $151@153.

Louisville: Demand slow; trend steady; supply normal; $135@140.

Chicago: Demand fair; supply very limited; eastern menhaden fish meal, 60% protein $135; western blended, 60% protein $145; imported Gulf $143@145; Northwest herring-salmon blend, nominally $137; Canadian herring, 73% protein $2.20, May or June, a unit of protein; 60% blended $160, delivered Midwest points.

Denver: Demand fair; trend steady; supply ample; 70% herring $2.40 a unit, f.o.b. Seattle; 60% menhaden $137, f.o.b. Gulf.

Minneapolis: Steady trend; fair demand; ample supplies; 60% meal $151.

Milwaukee: Demand and supply fair; $159, Milwaukee.

Portland: Demand slow; supply ample; trend lower; $2.40, f.o.b. Vancouver.

Atlanta: Demand fair; trend strong; supply limited; 60% $147, sacked, immediate.

HAY

Denver: Demand slow; trend steady; supply ample; baled alfalfa $24@26; baled mountain $30@33.

Wichita: Demand slow; supply ample; prairie $14@18, alfalfa $14@18.

Boston: Demand steady; supply adequate; No. 2 timothy $40@42.

Ft. Worth: Demand fair for alfalfa, practically nil for prairie and Johnson grass; supply sufficient; carlots, baled, No. 1 alfalfa $36@40, No. 2 $36@38; prairie No. 2 $26@28; No. 2 Johnson grass $24@26, delivered Texas common points.

Ogden: Supply normal; $1 bale; $18 in the barn.

Seattle: Demand slow; trend weak; supply good; alfalfa U.S. No. 2 green $22, delivered, truck lots.

Los Angeles: Active interest for increasing offerings and mostly for new crop; new crop, Imperial Valley No. 1 $36@37.50; U.S. No. 1, old crop $32@34; U.S. No. 2 leafy, new crop $33@34; U.S. No. 2 green, old crop $29@30; No. 2, old crop $27@28.

Philadelphia: Demand dull; supply light; $32@35.

Cincinnati: Demand fair; trend steady; supply adequate; No. 1 timothy $23.50; No. 1 red clover $25; No. 1 second cutting green alfalfa $30; No. 1 red clover, mixed $27; wheat or oat straw $23.

Portland: Demand slow; supply ample; trend unchanged; $25.

Louisville: Demand dull; trend steady; supply good; No. 1 hay, any variety of local $23@25; No. 2 hay, any variety of local $20@23; straw $18@20.

HOMINY FEED

Memphis: Demand nil; trend higher; supply ample; white $50, yellow $50.

Milwaukee: Demand good; supply fair; $48.50, sacked, Milwaukee, May.

Louisville: Demand fair; trend strong; supply normal; up $3.50 ton; $51.10.

Chicago: Demand fair; supply improving; $47@47.50.

St. Louis: Demand fair; trend steady; supply limited; yellow $46.50.

Buffalo: Demand good; trend steady to higher; supply fair; $63.50, bulk, Boston.

New Orleans: Demand good; trend steady to higher; supply adequate; $54.50@55.

Boston: Demand steady; supply adequate; April shipment $52.50; May and June $53.

Seattle: Demand slow; trend steady; supply good; $53, delivered, sacked, carlots.

Cincinnati: Demand good; trend higher; supply adequate; $50.

Kansas City: Demand fair; trend steady; supply very tight, with little available; nominally $40, bulk, Kansas City, for yellow; $3.50 more for sacks.

LINSEED OIL MEAL

Cincinnati: Demand poor; trend higher; supply adequate; new process $72; old process $73.50.

Ft. Worth: Demand slow; supply adequate; carlots, 34% extracted, April $78.75.

Seattle: Demand slow; trend steady; supply ample; $75, delivered, carloads, 34% protein.

Omaha: Demand fair; supply light; 34% solvent process $60.76, bulk, Omaha; 32% old process $62.26, bulk, Omaha.

Minneapolis: Firm trend; tight supplies; very good demand; 34% solvent extract $55.50, April, bulk basis, Minneapolis; 22% flaxseed oil screenings oil feed $38.50, May, bulk basis, Minneapolis.

Denver: Demand fair; trend strong; supply ample; 34% $79, rail.

Philadelphia: Demand and supply fair; 34% $76.

Wichita: Demand fair; supply sufficient; 34% $75.50.

Boston: Demand and supply light; $73.75.

Los Angeles: Demand fair; trend unchanged; supply ample; local production, 29% protein $61@62.

Kansas City: Demand slow; trend steady; supply adequate; solvent meal $55, bulk, Minneapolis; old process $57.

New Orleans: Demand light; trend stronger; supply limited; 34% or higher protein $50@50.50.

Milwaukee: Demand good; supply fair; old process $67.75, new process $65.75.

Chicago: Demand fair; supply tight; solvent $66.50@67; expeller $69@69.50.

Louisville: Demand slow; trend stronger; supply light; old process $75.75, steady; new process $73.25, up $1.

Portland: Demand slow; supply ample; trend unchanged; $73.

MALT SPROUTS

Chicago: Demand fair; supply adequate; No. 1 $31.50@32.

Boston: Demand very light; supply spotty; $43.

New Orleans: Demand fair; trend steady; supply adequate; No. 1 $35@40.

Milwaukee: Demand good; supply fair; oddweights $33; evenweights $36.50.

Cincinnati: Demand fair; trend steady; supply adequate; No. 1 $40.

MEAT AND BONE MEAL

Cincinnati: Demand fair; trend steady; supply short; 50% meat and bone scraps $94.50, sacked, f.o.b. Cincinnati.

New York: Demand and supply good; trend steady; 50% $87.50, 55% $95, bulk; 50% $90.50, 55% $98, sacked.

Wichita: Demand good; supply sufficient; 50% $107.50, f.o.b. plant; 55%, no quotations, no offerings.

Los Angeles: Demand steady; trend easier; supply easing up; 50% protein $2.30 a unit of protein.

Boston: Demand steady; supply adequate; $1.50 a protein unit; converted 50% $87.50.

Seattle: Demand good; trend easy; supply fair; $110, ex-warehouse, 50% protein.

Portland: Demand slow; supply limited; trend unchanged; $2.10 a unit.

Chicago: Demand good; supply limited; 50% protein $102.50@105.

New Orleans: Demand good; trend steady to firm; supply limited; 50% $95@98.

St. Paul: Softer trend; fair demand; adequate supplies; 50% meat and bone $107.50@115.

Denver: Demand slow; trend steady; supply short; $100.

Ogden: Supply average; $110, in 100-lb. bags.

Ft. Worth: Demand fair; supply extremely light; meat and bone, 50% $110@115, f.o.b. or delivered Ft. Worth.

St. Louis: Demand good; trend steady; supply limited; $113.

Omaha: Demand ample; supply good; $107.50, sacked, Omaha basis.

Buffalo: Demand fair; trend stronger; supply ample; 50% meat scraps $97.50 bulk, $102.50 sacked.

Kansas City: Demand good; trend stronger; supply tight; 50% meat and bone scraps $108@112.50, sacked.

Louisville: Demand fair; trend firm; supply good; $92.50@97.50.

MILLFEEDS

Minneapolis: Very firm trend for middlings; extremely good demand; tight supplies; bran $43.50@44 sacked, $43 bulk; standard midds. $47@47.50 sacked, $44.50 bulk; flour midds. $47.50@48; red dog $48@49.

Kansas City: Demand strong for all but bran; trend firm; supply of shorts especially tight, bran is available; bran $39.50@40.25, shorts $43.25@44, sacked; bran $35@35.75, shorts $43@43.75, middlings $43@43.75, bulk.

Wichita: Demand good; supply adequate; basis Kansas City: bran $40@40.50, shorts $42.75@43.25; bran advanced $2 and shorts $4.75, compared with the preceding week.

Ft. Worth: Demand fair for bran, active for shorts; supply sufficient on bran, offerings light on shorts; carlots, burlaps, prompt, bran $48.50@49.50; gray shorts $51.50@52.50, delivered Texas common points; $1.50 higher on bran and $4 higher on shorts compared with previous week.

Chicago: Millfeeds advanced $2.50@7 ton

COB ABSORBENT FEED BASE
HARD WOODY RING PARTICLES REMOVED
Mixed With Molasses for Livestock Feed
Will Absorb More Than 5 Times Own Weight
Bagged in 4-Ply Sewed Paper Bags
TI-CO INDUSTRIES, INC.
P. O. BOX 185 — FEDERAL 2-5942
TIPTON, INDIANA — ELWOOD, INDIANA

For DEHYDRATED ALFALFA—
"MERRY MIXER" GREENULES*
BETTER DISPERSION!
DUST-FREE! FREER FLOWING!
MORE UNIFORM!
CONSOLIDATED BLENDERS INC.
Fremont, Nebr. - Phone Park 1-9000
*TRADE MARK

FROM ICELAND **COD-LIVER-OIL** FROM ICELAND
VITAMIN-A-STABILIZED
MIDLAND WESTERN INC.
160 W. SPRUCE ST., READING, PA.

USERS OF ANIMAL PROTEINS AND FATS!
Keep accurately posted and watch your profits rise!
Pratt's FATS & FEEDS DAILY, an authoritative price guide, has published for over 50 years the markets on dry rendered tankage, meat & bone meal, wet rendered tankage, feather meal, tallow and grease as well as vegetable oils and meals and other animal and vegetable feed raw material. Write us for a sample copy and subscription rates.
PRATT BROS. COMPANY
154 Nassau St., New York 38, N. Y. — 183 Essex St., Boston 11, Mass. — 431 So. Dearborn St., Chicago 5, Ill.

FEED GRAINS
KAFIR-MILO
BARLEY - CORN - OATS - WHEAT
From Every Grain Producing Area in United States
CONTINENTAL GRAIN COMPANY

OFFICES:
New York, Chicago, Kansas City, St. Louis, Omaha, Columbus, Memphis, Norfolk, Nashville, Enid, Minneapolis, Louisville, Fort Worth, Buffalo, Toledo, Houston, Galveston, Portland, San Francisco, Vancouver, B.C., Winnipeg, Los Angeles

TERMINAL ELEVATORS:
Kansas City, St. Louis, Chicago, Buffalo, Omaha, Toledo, Columbus, Fort Worth, Portland, Boston, Galveston, Enid, Minneapolis, Norfolk, San Francisco, Nashville, Louisville, Memphis, Houston

with standard midds. taking the full jump. Turkey feeds said to be taking limited supplies of that type of milling offal. Corn prices are advancing, too, and millfeeds are being substituted in some cases, it is reported. Flour mill running time is slow, which leads to further upward strain on the price structure. Quotations: bran $45.50@46, standard midds. $51.50@52, flour midds. $52@53, red dog $52.50@54.

St. Louis: Demand good; trend higher; supply limited; bran $45@45.50, shorts $48.75@49.25, sacked; bran $40.50@41, shorts $48.50@49, middlings $48.50@49, bulk.

Cincinnati: Demand good; trend higher; supply adequate; bran $51.50; middlings $53.50.

Boston: Demand very aggressive; supply tight; bran $54.25, middlings $55.

Buffalo: Millfeed prices shot up sharply on strength in the West, some dairy feed demand and low bran inventories. There was some activity April 14 but little was done after that on the higher prices. Levels are considered as asking prices and mills are giving discounts. There was a semblance of tightness to shipping positions. Bran ended $7.50 higher; middlings were up $7 and red dog gained $2.50. Quotations April 16: bran $52, standard midds. $53@53.50, red dog $56@56.50. The bulk differential on both bran and middlings was $4.50.

New York: Demand good; trend upward; supply fair; bran $57.50@58.50, standard midds. $59.50@60.50.

Philadelphia: Demand spotty; trend unsettled; supply fair; bran $55, standard midds. $57, red dog $60.

New Orleans: Demand good; trend stronger; supply light; bran $52@53.25; shorts $54@55.25.

Louisville: Demand good; trend strong; supply fair; bran $51.75, up $3.45; mixed feed $53.65, up $3.45; middlings $57.50, up $6; shorts $56, up $4.75.

Memphis: Demand fair; trend steady; supply scarce; wheat bran $48.25, gray shorts $52, standard midds. $52.

Seattle: Demand fair; trend firm; supply limited; $39, delivered common transit points, carlots.

Portland: Demand slow; supply ample; trend higher; $38.

Ogden: Supply normal; to Utah and Idaho: red bran and mill run $37, middlings $42; to Denver: red bran and mill run $44, middlings $49; to California: red bran and mill run $44.50, middlings $49.50, f.o.b. San Francisco and Los Angeles.

Denver: Demand good; trend strong; supply of shorts tight; bran $43.75, shorts $46.25, mill run $45.

Los Angeles: Standard mill run $47.50@48.50, limited demand, light offerings for nearby positions; red bran $54@56, limited demand, adequate supplies for demand.

MINERAL FEED

Ft. Worth: Demand fair; supply ample; all-purpose granules $89, block $94; mineral phosphorus 6% granules $105, block $110; cattle-sheep mineral 7% phosphorus granules $99, block $103; hog mineral phosphorus 3½% granules $88, phosphorus 2% $78 (all in 50-lb. paper bags).

Seattle: Demand fair; trend steady; supply good; mixer mineral $48, ex-warehouse; all-purpose mineral $85, ex-warehouse.

Ogden: Supply normal; $110 in 50-lb. blocks; $98, granules; 50-lb. bags.

Sioux City: 50-lb. mineral blocks 8.2% phosphorus $92; 7.5% phenothiazine sheep mineral blocks $4 each.

Denver: 7.5% phenothiazine, 45-lb. block $4.50; 8.2% phosphorus, 50-lb. block $3.50; 7.5% phenothiazine, 8.2% phosphorus, 45-lb. block $5.25; 5% phosphorus, 50-lb. block $2.65.

Portland: Demand good; supply ample; trend unchanged; $42.

Wichita: Demand good; supply adequate; all-purpose with iodine, 50-lb. blocks $95, 100-lb. bags $90, f.o.b. plant.

MOLASSES

Ft. Worth: Demand fair; supply sufficient; blackstrap 16¢ gal., f.o.b. Houston; delivered Ft. Worth truck $35.06, seller's market price on date of shipment.

New York: Demand and supply good; trend steady; blackstrap 18¢ gal., tank cars, tank wagons, f.o.b. New York.

Cincinnati: Demand fair; trend steady; supply adequate; 14½¢ gal., New Orleans.

Seattle: Demand fair; trend steady; supply good; $24, f.o.b. Seattle, tank car lots or truck lots.

Boston: Demand steady; supply plentiful; 18½¢ gal. in tank cars.

New Orleans: Demand fair; trend steady; supply adequate; tank cars or trucks 14½¢ gal.; 600-lb. customers' drums $9.36.

St. Louis: Demand slow; trend steady; supply ample; 14½¢ gal., New Orleans.

Buffalo: Demand and supply good; trend steady; 18½¢ gal., f.o.b. Albany.

Kansas City: Demand slow; trend steady to stronger; supply adequate; 14¼@14½¢ gal., tank car, New Orleans, for immediate; 14½@14¾¢ gal for May; 15@15½¢ gal. for June-August.

Los Angeles: Demand unchanged; trend firmer; supply ample; $25 bulk, f.o.b. tank cars; $25.25 bulk, f.o.b. tank trucks.

Minneapolis: Steady trend; good demand; ample supply; 14½¢ gal., New Orleans; $34 ton, terminal, Minneapolis.

Denver: Demand fair; trend steady; supply ample; $47, tank car.

Memphis: Demand good; trend firming; supply adequate; blackstrap 14½¢ gal., tank car, f.o.b. New Orleans, and $30.69 delivered Memphis, truck.

Louisville: Demand slow; trend stronger; supply normal; 15¢ gal., tank car lots, f.o.b. Gulf ports.

Atlanta: Demand fair; trend steady; supply limited; citrus $18, bulk, f.o.b. Florida producing points, immediate.

NIACIN

New York: Trend steady; $8 kilo, 50-kilo lots; $8.10 kilo, 10-kilo lots; $8.20 kilo, 5- and 2½-kilo lots; $8.30 kilo, 1-kilo lots; freight prepaid or paid to destination.

OAT PRODUCTS

Seattle: Demand fair; trend firmer; supply ample; whole oats $61, ground oats $61, rolled oats $63, all ex-warehouse, l.c.l., sacked.

Minneapolis: Steady to slightly softer trend; demand off at week end; ample supplies; feeding rolled oats $85, pulverized $44, feeding oatmeal $71, crimped oats $61, reground oats $17.

Memphis: Demand poor; trend steady; supply ample; 3½% protein, reground oat feed $19.50.

Louisville: Demand fair to good; trend stronger; supply normal; reground $21, rolled oats $91, feeding oatmeal $84, crimped white $71, pulverized $51.

Cincinnati: Demand fair; trend steady; supply adequate; reground oats $20.50; pulverized white oats $47@51, rolled oats $85.50@91.50.

Los Angeles: Demand fair; trend steady; supply adequate; pulverized oats, local production $60.

Philadelphia: Demand slow; supply fair; pulverized white oats $52.50; Canadian oat feed $26.50, nominal; domestic $26.

Ft. Worth: Demand fair; supply sufficient; oat millfeed $39.95; reground oat millfeed, 3% protein, sacked $22.45; 8% protein, bulk $27.

Boston: Demand and supply fair; white pulverized $54; reground oat feed $24@25.

Chicago: Demand fair; supply adequate; reground oat feed $14@14.50; fine ground feeding oatmeal $71@72; feeding rolled oats $83@84.

New Orleans: Demand fair; trend firmer; supply spotty; ground $71@71.50; pulverized $71.50@72.

Portland: Demand slow; supply ample; rolled $59, ground $56, cleaned $59.

OYSTER SHELL

Seattle: Demand and trend steady; supply good; eastern $40, l.c.l., ex-warehouse.

Louisville: Demand fair; trend steady; supply good; in 80-lb. paper bags $23.17, in 50-lb. paper bags $23.42, in 25-lb. paper bags $25.67.

Boston: Demand and supply steady; $25.36 in paper.

Cincinnati: Demand fair; trend steady; supply adequate; $21.75.

New Orleans: Demand good; trend steady; supply adequate; $16@17, local.

Los Angeles: Demand slow; trend steady; supply ample; $14.80.

Portland: Demand good; supply ample; trend unchanged; western $32, eastern $38, granite grits $26, shell flour $16.

PEANUT OIL MEAL

Milwaukee: Demand and supply fair; 28% $36.

Atlanta: Demand fair; trend strong; supply limited; 45% $69, sacked, immediate.

PEAT MOSS

Philadelphia: Demand and supply fair; $2.90, f.o.b. pier.

Portland: Demand good; supply ample; trend unchanged; $3.25 bale.

Boston: Demand and supply steady; $3.15 bale in cartots.

Chicago: Demand heavy; supply moderate; $3.75@3.85, standard 7½ cu. ft. bale.

Los Angeles: Demand better; supply adequate; trend steady; Canadian 6.1 cu. ft. bales $3.85.

Seattle: Demand and supply good; trend steady; $3.25 bale, delivered, truck lots.

New York: Demand and supply good; trend steady; Canadian, 7 cu. ft. bale, veneer wrapped $3.32, freight prepaid; German 7½ cu. ft. bale $2.97, at dock, New York.

POTASSIUM IODIDE, U.S.P.

New York: Trend steady; granular or crystals $1.90 lb. in 250-lb drums, $1.92 lb. in 100-lb. drums, $1.95 lb. in 25-lb. drums; 90% KI in calcium stearate or carbonate mixtures, $1.81 lb. in 250-lb. drums or 200-lb. lots, $1.83 lb. in 100-lb. drums, $1.86 lb. in 25-lb. drums; f.o.b. New York, New Jersey or Pennsylvania, freight allowed to destination on 100-lb. drums or larger packings.

Cincinnati: Demand good; trend steady; 90% KI in calcium stearate or carbonate mixtures, 250-lb. drums $1.81; 200 lb. in 100-lb. drums $1.83; 25-lb. drums $1.86, f.o.b. Cincinnati.

POULTRY BY-PRODUCTS

Boston: Demand good; supply tight; $95, f.o.b. eastern shipping points.

Ft. Worth: Demand good; supply very limited; 55% protein $105.50, f.o.b. north Texas plant.

Los Angeles: Demand good; trend steady; supply limited; $2 a unit of protein.

Atlanta: $105, f.o.b. Alabama and Georgia producing points, immediate.

Salisbury, Md.: Trend firm; good demand; limited supply; $92, f.o.b. producers' plants.

RIBOFLAVIN

Cincinnati: Trend steady; feed grade (in feed supplements) 4¢ gram in 3.36 to 16 gm./lb. mixtures, freight prepaid or paid to destination.

New York: Trend steady; feed grade (in feed supplements) 4¼¢ gram in 3.36 to 16 gm./lb. mixtures, freight prepaid or paid to destination.

RICE BY-PRODUCTS

Ft. Worth: Demand fair; very light offerings; carlots, rice bran $32@33, prompt shipment, f.o.b. south Texas rice mills; hulls $2, f.o.b. mills.

Los Angeles: Demand and trend steady; supply very limited; bran, California production, high fat content $52.

Atlanta: Demand fair; trend steady; supply limited; bran $45.50, sacked, immediate.

SCREENINGS

Denver: Demand slow; trend steady; supply ample; $38.

Buffalo: Demand good; trend steady to higher; supply fair; ground and sacked $31.25, New York, lake and rail; unground, bulk $26, New York.

Cincinnati: Demand fair; trend steady; supply adequate; Canadian $22.50.

Ft. Worth: Demand fair; supply sufficient; 12% protein, ground $32, nominal.

Chicago: Demand fair; supply plentiful; ground grain screenings $26.50; Canadian $18.50 bulk.

Minneapolis: Trend firm; demand strong; extremely tight supply situation for nearby; lights $8@18, mediums $19@25, heavies $26@36; Canadian, bulk $18; Canadian ground $27; flaxseed screenings $30; oil type flaxseed screenings, 15% basis $38.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Atlanta: $20.40@20.67.
Buffalo: $25.31@25.45.
Chicago: $24.77@24.90.
Cincinnati: $23.47@23.60.
Des Moines: $25.23@25.35.
Kansas City: $24.88@25.
Memphis: $22.20@22.47.
Minneapolis: $25.92@26.06.
Philadelphia: $24.32@24.45.
St. Louis: $24.14@24.27.

SORGHUMS

Ft. Worth: Demand fair; limited offerings; carlots, bulk, No. 2 yellow milo $2.42@2.44, Texas common points.

Los Angeles: Demand steady; trend firmer; supply adequate; milo $2.72½ cwt., bulk.

SOYBEAN OIL MEAL

Milwaukee: Demand good; supply fair; $61, bulk, Decatur.

Decatur: Demand good; supply adequate; 44% bulk, unrestricted, April $61.50@62.

Minneapolis: Firm trend; excellent demand; tight supplies; $68.25.

Denver: Demand fair; trend steady; supply ample; 44% $85, rail.

Memphis: Demand good; trend steady; supply limited; prime 44% solvent $64, sacked, f.o.b. Memphis.

Chicago: Soybean oil meal jumped $3.50 @4 ton during the week ending April 16, reflecting good demand and limited supplies. At the higher level demand slowed. May delivery meal is going at around a $2 discount. Quotations: 44% soybean oil meal $71.50@72.

St. Louis: Demand good; trend higher; supply limited; $71.50.

Ft. Worth: Demand good; extremely limited offerings, nearby shipment; carlots, 44% $86 depending on origin and tonnage, April; $81.50 scattered May; truck delivery $74 April, $72.50 May.

Los Angeles: Demand good; trend firmer; light offerings for nearby; $93.47.

Seattle: Demand steady; trend strong; supply ample; $95, delivered, carlots.

Cincinnati: Demand poor; trend higher; supply adequate; $62, bulk, Decatur.

Kansas City: Demand slacking off somewhat but still good; trend steady; supply tight but not so short as earlier; meal for Kansas City and western shipment $58@60 immediate, $57@58.50 April, $55@58 May bulk, Decatur; unrestricted meal $57.50@59.50 for May, with no offerings for immediate.

New Orleans: Demand good; trend very firm; supply scarce; 44% $86.50@87.

Boston: Demand active; supply tight; 44% $60.50@62; 50% $70, both bulk quotations, f.o.b. Decatur.

Louisville: Demand slow; trend steady; supply normal; $71.43.

Philadelphia: Demand and supply fair; trend unsettled; 44% $60.50, bulk, Decatur.

Omaha: Demand good; supply limited; $70.25, bulk, delivered Omaha.

Wichita: Demand good; supply ample; 44% $74, 50% $83.50, f.o.b. Wichita.

Ogden: Supply normal; $81@86.

Portland: Demand slow; supply limited; trend firm; $54.50, f.o.b. Decatur.

Atlanta: Demand fair; trend steady; supply ample; 44% $75, sacked, immediate.

TANKAGE

Wichita: Demand good; supply sufficient; 60% $112.50, f.o.b. plant.

New Orleans: Demand good; trend steady; supply sufficient; 60% $124@125.

Kansas City: Demand good; trend stronger; supply tight and getting tighter with one packer's hog kill operations shut down by labor trouble; 60% digester $112.50@113, sacked.

St. Louis: Demand good; trend steady; supply limited; $117.

St. Paul: Steady trend; slower demand; adequate supplies; 60% digester $112@117.

Omaha: Demand ample; supply good; $112.50, Omaha basis.

Ft. Worth: Demand fair; supply extremely light; 60% digester $110@115, f.o.b. Ft. Worth.

Cincinnati: Demand fair; trend steady; supply short; 60% digester $108.50, sacked, f.o.b. Cincinnati.

Chicago: Demand good; supply very limited; 60% protein $112.50@115.

Louisville: Demand good; trend steady; supply normal; 60% $97.50@102.50.

VITAMIN E FEED SUPPLEMENT

Cincinnati: Demand good; trend steady; any quantity in 100-lb. drums $1.70; in 25-lb. drums $1.75, freight allowed to destination.

Rochester, N.Y.: Demand and supply good; trend steady; 100-lb. drums $1.70 lb., 25-lb. drums $1.75 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

New York: Demand and supply good; trend steady; 100-lb. drums $1.70 lb., 25-lb. drums $1.75 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

WHEAT GERM MEAL

Buffalo: Demand fair; trend steady; supply adequate; commercial grade $58, sacked, f.o.b. Buffalo.

New Orleans: Demand fair; trend steady; supply adequate; $73@75, cottons.

Chicago: Steady trend; quiet demand; adequate supplies; $68.50.

Oregon Groups Seek Funds for Building Hay Pelleting Plants

NYSSA, ORE.—A drive has been organized in Nyssa to raise $200,000 to build a hay pelleting plant. Other groups in Ontario, Ore., are also seeking to get a plant for that city.

O. D. Dearborn, manager of the Pacific Supply Cooperative at Ontario, says his organization is doing considerable hay-pelleting research and is observing similar developments at several other sites in Oregon.

At a recent meeting of the Nyssa Chamber of Commerce, Hugh Tebler, feed processor and chairman of the new business committee, told of the need in the area for a mill that would pellet a complete ration for beef, sheep and dairy cattle.

Several large eastern Oregon feeders have indicated they would use the new product if it was available in the area. They expect pellet feeding to increase profits through minimizing waste and cutting feeding expenses.

Russ H. McKennon, manager of the seed and feed division of the Pendleton (Ore.) Grain Growers, recently said his company has been working with Oregon State College in the development of both pellet and wafer forms of feed.

The Malheur County, Oregon, Farm Bureal has said it favors the establishment of privately-owned hay pelleting plants in the area.

Texas Dean Named To Post at Oregon

CORVALLIS, ORE.—Dr. James C. Miller, dean of the school of agriculture at Texas A&M College, last week was named new head of the Oregon State College dairy and animal husbandry department.

The departments of dairy and animal husbandry were combined here last July upon the retirement of P. M. Brandt, then head of the school's dairy department. Dr. J. R. Jones, professor of dairy husbandry, has served as acting head of the combined departments.

Dr. Miller is president of the American Society of Animal Production.

MANEY BROS. MILL & ELEV. CO.
Minneapolis, Minnesota
Feed Ingredients of All Kinds
FORMULA MIXING FOR DEALERS
Excellent References

Dehydrated Corn Cobs Products
Flour — Meal — Litter
• *Highest Quality* • *Prompt Shipments*
• *Bulk* • *Bagged*
Prices and Samples on Request
Cargill, Incorporated
Commodities Department
200 Grain Exchange • Minneapolis 15, Minnesota

recession blues..?
Small feed manufacturer in competition with the giants? Chances are, you're faced with a scarcity of qualified technical help. That's where our new service comes in.
MANAGEMENT CONSULTATION, EVALUATION, FORMULATION
PHONE: CHapel 2-1091
agricon
S. H. MORRISON, Ph.D., D.V.M. Director
515 Woodlands Drive
Clinton, Iowa

DISEASE

(Continued from page 1)

ence of several components differing in kind or amount from other animal fats. . . . Preliminary studies suggest that the toxic materials present may well be a mixture of a number of compounds. Efforts to identify the materials and find a suitable qualitative test for detection of the toxic substance or substances are continuing."

The AMIF repeated previous recommendations that "only clean, well settled, well stabilized fat" should be sold for and used in feeds. "The list of raw materials to be excluded until their safety and value are established definitely," AMIF said, "would include all extraneous materials not derived from fat and, in addition, all residues, distillates, fatty fractions, etc. (regardless of whether they have been derived from pure fat) until their value in feeds is thoroughly tested and established."

Pure Fat Not Implicated

The AMIF scientists went on to say: "We are entirely confident that our previous conclusions that pure fat in itself is in no way implicated in the disease are still valid. No evidence to the contrary thus far has been introduced."

The AMIF special report—"Progress in Determining Factors in Certain Animal Fats Relating to a Poultry Disease"—was prepared by Dr. O. H. M. Wilder and L. R. Dugan, Jr., of the foundation staff.

Text of Report

This particular report was released for general publication, and the text of the report follows:

In a previous Special Report, we directed attention to the outbreak of a new, serious but unidentified disease condition of chickens. It was stated that this diseased condition appeared to be related to the presence, in some feeds, of toxic fatty materials of a non-glyceride type and, further, that a number of laboratories were attempting to isolate and identify the causative factor.

This diseased condition subsequently has been variously termed "21-day chick disease," "x-disease," or "water belly." A detailed description of the disease recently was published by Schmittle, Edwards and Morris in the Journal of the American Veterinary Medical Assn. (Vol. 132, pp. 216-219, March 1, 1958). (Reviewed in Feedstuffs, April 12.)

As indicated previously, a number of laboratories, including federal, state, industry, and the AMIF, have been conducting extensive research on this problem since early in December, 1957, trying to find the cause and means of prevention of the disease. As far as we are aware at the present time, no one yet has obtained the final answer, but definite progress is being made as the various groups continue their investigations.

The Food and Drug Administration, U.S. Department of Health, Education and Welfare, issued a report on April 1 of their findings to date (see Feedstuffs, p. 1, April 5, 1958). The FDA investigation has established an apparent relationship between the disease and the use of certain fatty materials in the poultry feed. The FDA report states that "the fatty materials were compounded in part from a black, tarry residue left from fat processing operations."

Whatever the source of the toxic factor, it does appear to be concentrated in the unsaponifiable fractions of those samples of fat that caused trouble. Fractionation of the unsaponifiable matter from these fats in the foundation laboratories has revealed the presence of several components differing in kind or amount from other animal fats. Among these, there appears to be a hydrocarbon fraction containing conjugated dienes which apparently are derived, at least in part, from steroids. Another quite small fraction has carbonyl groupings; a third fraction has materials which again appear to be steroid in nature and have both hydroxyl and carbonyl groupings.

Preliminary chemical and feeding studies in our laboratories and by other groups suggest that the toxic materials present may well be a mixture of a number of compounds. Efforts to identify the materials and find a suitable qualitative test for detection of the toxic substance or substances are continuing.

Additional studies at the American Meat Institute Foundation have been initiated on the assumption that some adverse and very drastic treatment may have induced molecular rearrangements in certain samples of fat, resulting in the formation of new and unidentified substances that are toxic to chicks. Materials are being prepared in the laboratory which resemble some of the constituents of fractions prepared from fats that caused the disease in chicks. These materials will need to be thoroughly evaluated in tests with chicks and no positive statement as to their toxicity can be made at this time.

When we consider the problem of isolation and identification of small amounts of substances present in preparations of complex materials, the possible instability of these substances, and variations in test procedures for determining toxicity with chicks, it is realistic to expect that considerable study may be needed to resolve this problem.

While the results thus far have been inconclusive, significant new knowledge has been obtained. As a result of our own and other work on the causative factors in this chick disease, it appears advisable to repeat our previous warnings that "only clean, well settled, well stabilized fat should be delivered to the feed mill." We repeat, also, our admonition that "the list of raw materials to be excluded until their safety and value are established definitely would include all extraneous materials not derived from fat and, in addition, all residues, distillates, fatty fractions, etc. (regardless of whether they have been derived from pure fat) until their value in feeds is thoroughly tested and established."

As this special report is released, we are entirely confident that our previous conclusions that pure fat in itself is in no way implicated in the disease are still valid. No evidence to the contrary thus far has been introduced.

The foundation will continue to keep in close contact with producers of animal fats, the feeding industry, government, and other research groups working on this important problem, and advise on any developments relating to the usage of feed grade animal fats in livestock feeds.

• • •

AMIF Report Supports Renderer Group Belief

CHICAGO — "The American Meat Institute Foundation report is gratifying. It supports the belief of the National Renderers Assn. that pure fat in itself is in no way implicated in the disease."

This comment was made by John J. Hamel, Jr., Valley Chemical Co., Mt. Pleasant, Mich., executive director of the NRA, Chicago, following issuance of the AMIF report on progress in determining factors in certain fats relating to a mysterious poultry disease.

"Even though the association has held this opinion from the start of the difficulty with poultry," Mr. Hamel said, "we have diverted funds from other important research projects to substantiate our belief. The AMIF experiments, which are supported by the NRA, will continue until all possible avenues have been explored."

The renderers' group, he noted, has supported extensive research since 1953 to develop recommended types of fat and proper feeding levels, as well as working closely with other industry groups to establish quality standards.

Mr. Hamel said he is "confident that present concentrated studies will evolve scientific answers and that fat and animal proteins, already important ingredients in the feed industry, will become even more valuable."

U.S.I. Builds Morea Plant in California

NEW YORK — Construction of a plant at Anaheim, Cal., to manufacture Morea liquid livestock feed premix has been announced by Robert H. Cornwell, vice president in charge of production, U.S. Industrial Chemicals Co., New York, division of National Distillers & Chemical Corp.

The company expects the plant to be operating by June 1, 1958. It is located on the property of the U.S.I. alcohol plant in Anaheim. Harry C. Barnes, manager of the alcohol plant, will also supervise the manufacture of Morea premix.

The Anaheim plant will supply Morea to Pacific Coast area mixer-distributors who will blend the concentrate with molasses for local sale.

Besides molasses, finished Morea liquid supplement contains ethanol, a hydrogen donor that speeds up rumen fermentation, improves cellulose digestion, and enables ruminant animals to consume more roughage, the announcement said. Other ingredients are urea, phosphoric acid and essential trace minerals.

Nutrena Adds 3 Men At East St. Louis, Ill.

EAST ST. LOUIS, ILL.—Earl J. Thuneman, Charles R. Powers and Jesse L. Parsons have been added to the East St. Louis division of Nutrena Mills, Inc.

Mr. Thuneman, who lives at Overland, Mo., will work in dealer development and in promotion of bulk handling of Nutrena feeds. He formerly was associated with Virginia-Carolina Chemical Co. and with Armour Fertilizer.

Mr. Powers, a resident of Seymour, Ind., has been named territory manager in southwestern Indiana. He was formerly with the Oliver Corp. and has been in the feed business with his father at Bicknell, Ind.

Mr. Parsons, who had farmed near Loogootee, Ind., and attended Purdue University, resides at Seymour, Ind. He has joined Nutrena's sales force and will work in east-central Indiana.

POULTRYMEN

(Continued from page 4)

volved have cooperated and are all very pleased with the results. None of them have lost business to the nonconformer or other wholesalers in the area," he related

Gilman Sylvester, United Cooperative Farmers, Fitchburg, said vertical integration in the broiler industry has produced a smoother flow of produce from the breeder flock through the processing line.

"This has resulted in increased efficiency in the use of labor and equipment and in a higher-quality, reasonably-priced product," he declared, adding that the contract must give the grower the proper incentive, a good income and must cover his overhead expense.

He also mentioned that he thought the cooperative type integration and contracts would give the industry stability and keep the New England poultry industry up with other sections of the country.

Richard Walker, hatching egg producer from Nashua, brought out that the big problem of hatching egg producers with meat type birds is in getting good production. He said he keeps Arbor Acres White Rocks mated to Vantress males and averages 185 eggs per bird housed. He feels that too much feed and the resulting fat birds are the cause for much poor production.

He explained that meat type birds must be restricted on their feed and so he limits the feed not only during the growing period, but also in the laying house.

Bigger Co-ops

Speaking on "The Need for Bigger Co-ops," Henry Bradford, Farmers Cooperative Service, U.S. Department of Agriculture, said poultry and egg cooperatives must be efficient, competitive and have a uniform quantity, all of which require a large volume.

"A new need is to diversify to spread the costs and reduce risks. There are big egg cooperatives on the Pacific Coast that do these things, such as the cooperative in Washington which did $51.8 million worth of business last year," Mr. Bradford pointed out. "They handle poultry, eggs and a complete line of supplies."

He mentioned that of the 12 co-ops studied by the USDA in New England, two handle feed, two do processing, four have a live poultry auction, seven sell supplies and none give financial assistance to egg producers.

"Combined, they are much smaller than the one in Washington, and yet New England produces nearly five times the volume of eggs that are produced in Washington," he said. "In the five New England states where these cooperatives are located, eggs account for 36% of the agricultural income, which is greater than any other farm commodity."

In pointing up the need for bigger cooperatives in New England, Mr. Bradford referred to a "rapid growth of big business," and said that "if the cooperatives are to maintain their position they must be as strong as their competition."

Coccidiosis Control

Richard D. Strout, poultry husbandry department, University of New Hampshire, discussed "A Program for Coccidiosis Control in Replacement Flocks."

Basing his talk on research at the university, he said the objective is to have the pullets immune before production starts, but not to have a severe outbreak.

"Field tests show that with continuous low-level feeding of a coccidiostat, this usually, but not always, occurs. After two or more years of using a coccidiostat, the level of infective material on a farm may be so low that there is not adequate exposure to produce immunity to some of the types present. This has led, in some cases, to outbreaks after the drug was withdrawn," he said.

Prof. W. C. Skoglund, head of the poultry husbandry department at the University of New Hampshire, gave a report on the carbon dioxide (CO_2) egg holding work being done at several state universities.

He said that whether oiling the eggs or putting them in a sealed bucket right after they are laid, the objective is to keep the CO_2 high enough to retard the albumen breakdown.

"If a sealed container is used, an absorbent is necessary to keep down molds. A tight, refrigerated egg room may act the same as a sealed container," he explained, adding that "the refrigerated egg room has not been beaten yet for egg storage."

CORN LEAVES OMAHA BY BARGE

OMAHA, NEB. — The year's first barge shipment of grain from Omaha left via the Missouri River this week, bound for St. Louis. Harry Christiansen, vice president of the Norris Grain Co., Omaha, estimated the corn shipment at 600 tons of No. 1 yellow. The barge will receive additional corn from the Norris firm at St. Louis before continuing on to its destination on the Tennessee River.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
February 8	1,013	573	932	847	153	683	1,926	1,567
February 15	1,018	596	812	780	153	592	1,921	1,735
February 22	961	528	867	957	131	669	1,928	1,733
March 1	1,013	531	784	964	136	716	1,941	1,751
March 8	999	583	885	993	179	620	1,986	1,616
March 15	1,003	611	831	905	139	644	1,967	1,540
March 22	962	656	804	958	175	659	1,788	1,788
March 29	1,010	669	774	870	172	741	1,741	1,806
April 5	1,044	599	997	889	142	739	1,950	1,698
April 12	1,070	628	943	944	227	705	2,057	1,741

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
February 8	1,242	525	2,415	312	6,165	215	2,465	1,461
February 15	1,271	531	2,423	354	6,108	240	2,444	1,630
February 22	1,277	492	2,495	343	6,132	229	2,397	1,751
March 1	1,191	518	2,570	297	6,244	241	2,731	1,538
March 8	1,204	466	2,651	323	6,307	259	2,509	1,644
March 15	1,135	460	2,518	393	6,015	203	2,588	1,537
March 22	1,146	470	2,271	327	5,840	221	2,440	1,452
March 29	1,141	527	2,335	306	6,103	237	2,584	1,468
April 5	1,397	549	2,432	348	6,468	253	2,790	1,552
April 12	1,374	570	2,576	335	6,875	297	2,876	1,815

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1958	1957
February 8	2,687	380	2,293	274	154	927	29,209	26,799
February 15	2,766	429	2,140	323	158	1,071	29,307	25,704
February 22	2,897	508	2,478	288	170	1,022	30,253	26,378
March 1	2,678	484	2,340	297	163	1,007	30,041	25,589
March 8	2,715	471	2,431	327	195	957	30,320	26,815
March 15	2,570	392	2,279	324	207	930	29,191	27,379
March 22	2,535	413	2,378	312	151	1,052	28,798	27,558
March 29	2,650	458	2,394	366	175	1,029	29,556	27,491
April 5	2,812	443	2,528	297	183	1,024	31,134	27,347
April 12	2,820	414	2,635	348	189	1,148	32,587	27,736

West Virginia Pulp Arranges Purchase Of Two Bag Plants

NEW YORK—Arrangements have been made for West Virginia Pulp & Paper Co. to purchase two multiwall bag plants from Arkell and Smiths, pioneer bag manufacturers. Approved by the boards of both companies, the sale still is subject to approval by Arkell and Smiths' stockholders.

Although terms of the transaction were not disclosed, David L. Luke, president of West Virginia, said his company would pay cash for Arkell and Smiths' plants at Wellsburg, W. Va., and Mobile, Ala. Sheldon S. Yates, president of Arkell and Smiths, said that the transaction with West Virginia does not include the bag company's plants at Canajoharie, N.Y., and Hudson Falls, N.Y., which will continue to be operated by Arkell and Smiths.

Mr. Luke said the two bag plants of Arkell and Smiths and the two plants of Fulton Bag & Products Co., New Orleans and St. Louis, acquired by West Virginia April 1, would become components of a new multiwall bag division of the paper company. Acquisition of these operations marks West Virginia's entry into the multiwall sack converting field.

The four bag facilities will enable the paper company to serve the multiwall markets east of the Rockies, Mr. Luke said. Multiwall sales offices are planned in New York, Chicago, Columbus, Ohio; Minneapolis, St. Louis, Kansas City, Denver, Dallas, New Orleans, Atlanta, and Charleston, S.C.

The two Arkell and Smiths plants being acquired by West Virginia will employ the present operating and sales organizations, a total of approximately 400 persons.

Grain Storage Schools Set for South Carolina

COLUMBIA, S. C.—Four grain storage schools conducted by the Clemson Extension Service will be held in South Carolina during April, E. W. Siedschlag, extension marketing specialist, has announced.

The schools will feature discussion and demonstration of grain storage facilities, preparing the facilities for storage and the fumigation and drying of grain in storage.

The schedule calls for schools in Orangeburg April 23; Anderson, April 24; Chester, April 25, and Kingstree, April 29, he said.

BUYS FARM STORE

LAURENS, IOWA — Marvin Brownlee has purchased the Boyd Farm Store here.

Conservation Reserve Applications Increase

WASHINGTON — More than 3.3 million acres of cropland had been offered for contracts under the 1958 Conservation Reserve of the Soil Bank through March 28, according to preliminary reports received by the U.S. Department of Agriculture from state Agricultural Stabilization Conservation (ASC) committees.

The reports showed an increase of some 332,000 acres over the nearly 3 million acres reported signed as of March 14.

For carrying out soil and water conservation practices and wildlife habitat improvement measures on the land to be taken out of production under the contracts, these farmers would earn up to 80% of the cost of establishing such practices. If they remain in compliance with the program, they will receive annual rental payments each of the years their contracts are in force.

Under the Conservation Reserve farmers sign contracts to divert general cropland from production of crops to soil and water conservation uses, tree plantings and wildlife protection for periods of three, five or 10 years.

Egg Council Formed For State of Virginia

HARRISONBURG, VA.—Leaders of Virginia's egg industry met here recently to organize the Virginia Egg Council, which has been functioning on a committee basis under sponsorship of the Virginia State Poultry Federation for the past three years.

The group adopted a temporary constitution and by-laws, elected officers and directors and laid plans for a program of activities to "promote and further the production and marketing of Virginia eggs."

John S. Hill, Culpeper, was elected first president of the new organization to be affiliated with the state poultry federation. R. J. Krueger, Roanoke, was named vice president, E. B. Kaylor, Harrisonburg, was elected secretary, and Garland Benton, Richmond, was chosen as treasurer.

In addition to the officers, the following were elected to the nine-member board of directors: W. B. Gouldman, Colonial Beach; Lloyd Herald, Norfolk; W. R. Shaffer, Maurertown; Mark Logan, Bridgewater, and Roland Coles, Bent Mountain. The constitution also calls for three ex-officio board members, one each to be appointed by the Virginia Department of Agriculture, Virginia Polytechnic Institute and the State Poultry Federation.

Range Conditions Reported "Good"

FARGO, N.D. — Range feed conditions through the principal western grazing areas were reported this week by the North Dakota crop and livestock reporting service in Fargo.

In the 17 western range states (this report is based on opinions submitted by stockmen in these states) conditions on April 1 were as good or better than during any year since 1942 in spite of the cold, wet weather of the past month.

Growth and development of new feed is about two weeks early on the Pacific Coast, about normal in the intermountain and northern plains and two weeks or more late in the central plains, Texas and the Southwest.

Surface moisture supplies are adequate to start grass in all areas. In addition, subsoil moisture and stock water supplies are more favorable than in many years, except for some local areas in the northern plains.

Adverse March weather required relatively heavy supplemental feeding. However, cattle were generally well maintained and show little shrink, except in Nebraska and Kansas where storms, wet weather and mud lowered the condition significantly.

Cattle have wintered in good to very good condition, except in east Texas and southeast Oklahoma. Feed supplies were short in these areas and new feed is late. Early calves have been strong with a high survival rate. There is still a strong demand for replacement stock maintained by ample supplies of harvested feed and the excellent grazing prospects.

Sheep have wintered well in all sections of the West. New feed has been adequate to abundant in the early lamb areas of Texas, Arizona and the Pacific Coast.

Spring lambs are starting to move in volume at relatively heavy weights and carrying a high percentage of "fats." There is a broad demand for breeding ewes and some contracts for fall delivery are showing a strong premium for ewe lambs.

Tonnage Increase Reported by G.L.F.

ITHACA, N.Y. — The Cooperative G.L.F. Exchange, in its weekly publication, noted that feed tonnage in the five weeks ending March 31 showed a considerable increase over the corresponding period last year.

The grand total of all feed was up 11.5%. Direct shipments led the list, it was reported, with an increase of 14.3%. Other classifications included: dairy feeds, up 11.7%; mash, pellets and crumbles, up 6.9%.

Total mills tonnage showed a 10.2% increase.

Twin City Nutrition Seminar Scheduled

ST. PAUL—The Twin City Nutrition Seminar will be held April 22 at Peters Hall, St. Paul Campus, University of Minnesota. It will begin at 7:30 p.m.

Scheduled speakers are two University of Minnesota staff men. Dr. Paul Waibel will speak on "The Aortic Hemorrhage Problem in Turkeys—Establishment of Field Experiments." Dr. J. D. Donker will discuss "The Role of Carbohydrates in the Rumen."

Chairman of the program will be Leo S. Becker, McCabe Co.

Toledo Club to Meet

TOLEDO, OHIO—The Toledo Feed Club will hold its monthly dinner meeting at the Ritz Nite Club April 21, Louis Brewster, president, announces. Dinner will be preceded with cocktails, and a program is planned for the evening.

Irregularity in Oilseed Meal Futures Reported

MEMPHIS — Oilseed meal futures closed irregularly April 16 on the Memphis Board of Trade, compared with April 9.

Profit-taking occurred early in the period in some soybean oil meal contracts, with trade interests good buyers on the reaction. They were not inclined to follow advances.

Some switching occurred in old-crop months. Also, there was a small amount of hedge selling thought to be coming from first hands.

Unrestricted soybean oil meal closed April 16 50¢ lower to 85¢ ton higher than on April 9, Eastern Trunk Line soybean oil meal 50¢ lower to 50¢ higher, bulk cottonseed oil meal 50¢ lower to $1.25 higher, and sacked old process cottonseed oil meal was unchanged.

Trading for the period amounted to 14,400 tons of unrestricted soybean oil meal, 1,000 tons of Eastern Trunk Line soybean oil meal, and 500 tons of bulk cottonseed oil meal

Cash oil meal business was reported good for soybean oil meal and dull for cottonseed oil meal.

MARKETS

(Continued from page 2)

low 20¢ lb. Eggs also held steady.

Some ingredients continued to climb during the week, with corn jumping 5 to 6¢, before easing, on a lack of good quality offerings. Oats however, turned weak and were off 1½ to 2¢. Barley moved up 2¢.

Animal fat firmed up and gained ⅛ to ¼¢.

Molasses held unchanged and some of the concern over Cuban supplies has eased.

Soybeans advanced $2 and most people believed it had reached its top for a while. Gluten meal rose $2, cottonseed oil meal was about steady and linseed oil meal was unchanged.

Meat scraps were a little weak and off $2 but fish meal held unchanged.

Brewers grains were up $1 to $1.50, gluten feed gained $2 and distillers grains held unchanged. Hominy advanced $1 to $1.50.

Millfeeds skyrocketed in sympathy with western strength, some dairy demand and low bran inventories. Bran rose $7.50; middlings climbed $7 and red dog gained $2.50.

Running time of formula feed manufacturers averaged 40 hours last week.

Central States

Feed business continued at a high level during the week ending April 16, with most feed manufacturers reporting a satisfactory order backlog and excellent outlook. A boost was given volume during the period by a sharp price rise in most feeds, ranging from $3@4 ton.

Higher prices for ingredients produced the advance, and most of the upturn could be accounted for by a jump in soybean oil meal and millfeed prices.

Most feeds were doing well, and hog and poultry starters were producing heavy volume. Turkey feeds were starting. Spring pastures were thought to be behind schedule, and this gave dairy feeds added incentive.

Most observers believed feed volume, which leveled off at a high plateau in March, will remain steady to mid-summer at least.

Southeast

Feed business, while perhaps slightly slowed during the past week, is still good, comparatively speaking. Weather again played an important part in extending drylot feeding in both dairy and cattle operations in many sections due to heavy rains.

While pastures were in good shape from a growth standpoint, it was too wet to put grazing animals out.

Roughage materials remained in good demand and supplies were scarce.

Feed mill running time was reported to be good in most cases and feed prices were being advanced in keeping with higher cost for feed ingredients.

Poultry and livestock prices, on the other hand, have shown signs of weakening, and broiler prices have declined to 18¢ f.o.b. farms in the north Georgia broiler-producing area. These facts, coupled with increased cost for baby chicks, were beginning to squeeze the broiler producer. However, baby chick placements continued to run high and demand was reported to be fair.

Advancing beet pulp markets caused additional demand for already short citrus pulp supplies. A price advance was anticipated in the very near future, which might possibly curtail present demand.

Feed ingredient buying by feed manufacturers has been on the slow side for the most part. Reports indicated that manufacturers were pretty well covered for the nearby position on most ingredients and preferred to watch markets for the time being.

South Central

Although area mills generally considered their business excellent, total deliveries for the week were not expected to equal those of the previous week. Business wasn't quite so good as it was the previous week and the mills who do the bulk of their trade through mill door pick-ups were the most affected. Country dealers were holding down their feed purchases and diverting as much of their trucking capacity as possible to hauling fertilizer, which is in demand now after a slow start due to unfavorable weather.

Feed demand covered the entire line of feeds with pig and hog rations doing remarkably well. Chick starter deliveries were disappointing to the mills as purchases of chicks for replacement flocks are materially less than had been estimated. Broiler feeds as well as turkey feeds were just beginning to show a modest volume. Dairy feeds continued to be quite active due to wet, slow growing pastures.

Running time was held to five days, either one or two shifts, with overtime runs. Mill spokesmen said that they prefer to operate on an overtime basis with their regular shifts rather than add an extra shift which might prove to be temporary.

Pacific Northwest

Principal ingredients continued to post price advances during last week's feed market trading.

Strong to higher prices for feed grains and soybean meal were reflected in the higher level of prices which included unchanged to 50¢ higher quotes for wheat millfeeds along with a $1.50 to $2.50 ton advance for soybean meal. Meat scrap values climbed $2.50 ton.

Linseed meal was offered for prices that were as much as $2 higher while meat scrap values gained as much as $2.50 ton. Corn listings were boosted $2 ton while oats values were unchanged to $1 higher and barley held steady.

Major feed manufacturers reported there continued to be a seasonally good demand for formula feeds with poultry mashes in the strongest position.

Mild weather and rapidly growing pastures restricted dairy feed sales to some extent, however most dairymen continued to feed heavier quantities of concentrates and feed grains.

A scarcity of eggs at most poultry plants caused most dealers to advance producer paying prices by 2¢ at the inside of the general range. This placed Portland prices to producers at 39 to 41½¢ doz. for AA large eggs with grade A large bringing 36 to 38½¢ and AA mediums 35 to 37½¢. AA small eggs were bringing poultrymen 28 to 30½¢.

North Portland livestock market trading was featured by $2 cwt. lower values for fed lambs and a 25¢ cut for butcher hogs. Spring lamb listings closed $7 cwt. lower than two weeks ago when they rated a dependable pre-Easter demand.

Mountain States

The formula feed picture the past week looked a little brighter to most observers. The continued high price of fat cattle seemed to have put some life into the picture—though there was room for improvement and not all dealers had been affected by increased volume.

Turkey feeds continued to rise in volume, though not too strong as yet.

Ingredient prices remained steady for the most part. Proteins were up in most instances—some of them running into buyer resistance as they got out of line with others.

Broiler and farm layer flocks don't seem to be very popular this spring—consequently feed sales were slow in this field.

Ohio Valley

Warmer weather finally arrived, and with temperatures reaching into the 70's, field grasses quickly took on a green tinge that indicates pasturage will become available by the end of the month, if the seasonable weather continues. However, frequent showers recently have kept farmlands too soft and muddy to work, and spring plowing and planting are far behind schedule.

Meanwhile, with continuing short supplies of cattle, hogs and sheep at area stockyards, combined with steadily advancing prices, valley farmers were reaping a financial harvest in marketing such farm animals as they have available. With recent retail price advances of up to 10¢ lb. for beef and pork, even more for lambs and increased sales of poultry, prices held at profitable levels.

As a result of the present unusual situation, sales of formula feeds continued improving, with virtually all types of feeds being in stronger demand than at any time in a year or more. One manufacturer commented: "Prices for farm animals being so high, farmers are not disposed to quibble over feed prices, but are buying in heavy tonnages in efforts to fatten their animals as quickly as possible, to take advantage of the current market demand."

This was resulting in full two-shift work schedules at virtually all area mills, with a number reporting third shift and weekend operations also. There was no present indication that this situation will change in the near future.

INDEX OF ADVERTISERS

The index of advertisers is provided as a service to readers and advertisers. The publisher does not assume any liability for errors or omissions.

Abbott Laboratories 75
Aeroglide Corporation 10
Agri-Tech, Inc. .....
Agricon, Inc. 100
Alabama Flour Mills .....
Albers Milling Co. 89
Albumina Supply Co., Inc... 75
Allied Chem. & Dye Corp. Nitrogen Division .....
Allied Mills, Inc. .....
Amburgo Co., Inc. 78
American Agri. Chemical Co.. 42
American Cyanamid Co. ..40, 41
American Dehydrators Assn...
American Elev. & Grain Div... 93
American Mill Serv. Co. ....
Anchor Serum Co. .....
Anderson Box Co. 80
Andersons, The 61
Anderson, V. D., Co. 92
Andrews Machine Co. .....
Arbor Acres Farm 23
Arcady Farms Milling Co. ..
Archer-Daniels-Midland Co. ..
Arco Dehydrating Co. .....
Arkell & Smiths .....
Armour & Co. 50
Aubrey Feed Mills .....

Baker, H. J., & Bro. .....
Baker, J. T., Chem. Co. ....
Barker, Moore & Mein Co. ..
Barnard & Leas Mfg. Co., Inc. 26
Bartlett, C. O., & Snow Co.. 66
Barton Salt Co., The .....
Bates Grain Co. .....
Baughman Mfg. Co., Inc. ...
Baxter, A. E., Engineering Co. 84
Bemis Bro. Bag Co. 71
Berg, Paul .....
Bigelow Sales Co. .....
Black, Sivalls & Bryson, Inc...
Blatchford Calf Meal Co. ... 60
Blomfield-Swanson .....
Borden Company 17
Bosworth Commission Co. ....
Bowman Feed Prod., Inc. 23
Bremco Alfalfa Mills, Inc., 76, 93
Brewers Yeast Council, Inc...
Brower Manufacturing Co...42, 90
Brown, Fred G., Pulv. Co. ....
Bruce Milling Co. .....
Bryant Engineering Co. .....
Burlap Council, The .....
Burrell, James H., & Co., Inc. 59
Burrows Equipment Co. 14
Burrus Feed Mills .....
Butler Chemical Co. 69
Butler Mfg. Co. .....

Calcium Carbonate Co. 18
California Pellet Mill Co. ...
Canadian Peat Moss, Ltd. ...
Caple, A. B., Co. 31
Cargill, Incorporated 27, 100
Carson Food Co. .....
Chambers, John C., Co. .....
Champion Portable Mill Co... 48
Chantland Mfg. Co. 90
Chase Bag Co. 57
Chemo Puro Mfg. Corp. ....
Checkerboard Grain Co. 66
Chicago Feed Ingredient Co.
Citrus Processors Assn. .....
Cleveland Vibrator Co., The.. 57
Clinton Corn Processing Co... 14
Cloffine, Herbert K. 82
Colby Milling, Inc. 79
Collier Livestock-Feader Co...
Colonial Poultry Farms 30
Columbia Phosphate Co. 66
Columbia Quarry Co. 50
Columbian Steel Tank Co. ...
Commercial Solvents Corp., 12, 13
Consolidated Blenders, Inc... 99
Continental Grain Co. 99
Continental Steel Corp. .....
Corn Products Sales Co. 91
Coronet Phosphate Co 25
Crete Mills 52
Cromwell Paper Co. 31
Crown Zellerbach Corp. .....
Cummings Schooler Co. ....

D. C. A. & Co. .....
Daffin Mfg. Co. 18
Dannen Mills, Inc. 48
Davis, H. C., Sons Mfg. Co. 95
Dawe's Laboratories, Inc. 104
Day Company, The 51
Daycom, Inc. 32
Decatur Elev. Co. .....
Dehydrating Process Co. ....
Delaware Poultry Laboratories
Devold, Peder, Oil Co. 16
Diamond V Mills, Inc. .....
Distillation Products Industries 37
Distillers Feed Research Council 19
Doane Agricultural Serv., Inc. 90
Doane Feed Products Co. ....
Dorsey Trailers 59
Doty Laboratories .....
Douglas Chemical Co. .....
Dow Chemical Co. 63
Duplex Mill & Mfg. Co. 81
DuPont de Nemours & Co., Inc., E. I. 88

Early & Daniel Co. .....
Eastman Chemical Prod. Inc. 76
Ehrsam, J. B., & Sons Mfg. Co., The .....
Elam Grain Co. .....
Entoleter Division, Safety Industries, Inc. .....
Eriez Mfg. Co. .....
Eschenheimer, Rudy, Co. .....
Eshelman, John W., & Sons..
Ewing, Ray, Co. .....

Farmers Mutual Hail Ins. Co. of Iowa .....
Feed Service Corp. .....
Fischbein, Dave, Co. .....
Flavor Corp. of America ...3, 93
Flour Mills of America .....
Food Mach. & Chem. Corp...
Forster Mfg. Co. 36
Fox Co. 43
Fox Valley Milk Feeds, Inc...
Fruen Milling Co. 7

Gaddis Bros. Mfg. Co. 9
Georgia Peanut Co. .....
Glidden Co. .....
Gold Kist Peanut Growers ...
Gorton-Pew Fisheries 66
Grace Chemical Co. 22
Grain Processing Corp. 77
Grand River Chem. .....
Griffith Labs., Inc. 68
Gump, B. F., Co. .....

Hales & Hunter Co. .....
Hallet & Carey Co. .....
Hand, Peter, Foundation ... 15
Hardy, H. E., & Co. .....
Hardy Salt Co. .....
Harris-Crane, Inc. .....
Harshaw Chemical Co. 64
Hayes and Stolz .....
Haynie Menhaden Prod., Inc. 11
Heard-Kinard-Smith, Inc. ....
Heck, Edward J., & Sons Co...
Hell Co., The .....
Helm Manufacturing Co. ....
Henderson Mfg. Co. .....
Hercules Powder Co. 70
Hess & Clark, Inc. .....
.....53, 54, 55, 56
Heterochemical Corp. 51
Highway Equipment Co. .....
Hilltop Laboratories 70
Hoffman-Taff, Inc. 81
Hogenson Const. Co. .....
Hogg, N. D., Ltd. .....
Holt Products Co. .....
Homer Mfg. Co., Inc., The ...
Honeggers' & Co. 85
Honeymead Products Co. ....
Hot Spot Detector .....
Howes, S., Co., Inc. .....
Hubbard Milling Co. .....
Hubbell, Charles H. .....
Hygeno Litter Co. .....
Hy-Line Poultry Farms .....

Ibberson, T. E., Co. 95
Illinois Soy Products Co. ....
Indian Jute Mills Assn. .....
Industrial Commodity Corp...
Industrial Molasses .....
International Harvester .....
International Machinery Development Corporation ..
International Minerals & Chemical Corp. 5
International Paper Co. .....
International Salt Co., Inc...
Iowa Limestone Co. .....

Jackson, Gilbert, Co., Inc. ...
Jacobson Machine Works ... 30
James Mfg. Co. .....
Jersee Co. 48
Johns-Manville .....
Jones-Hettelsater Const. Co...

Kalo Co. .....
Kansas Soya Prod. Co., Inc...
Kees & Company 81
Kellogg, Spencer, & Sons, Inc.
Kem Mfg. Co. .....
Kemp, C. M., Mfg. Co. .....
Kent Feeds .....
Kent, Percy, Bag Co., Inc...
Keystone Steel & Wire Co. ...
Kindstrom-Schmoll Co. .....
Koelsch, Charles J., Grain Co.
Koppers Co., Inc. .....
Kraft Bag Corp. 44
Kraft Foods Co. 32
Kuss, R. L., & Co., Inc. 42

Laboratory Construction Co... 58
Labatt, John .....
LaBudde Feed & Grain Co... 84
Land O'Lakes Creameries, Inc.
Landers Mill Mfg. Co. .....
Lauhoff Grain Co. 26
Leftwich, J. H., & Co., Inc...
LeGear, Dr., Inc. .....
Lennox Industries, Inc. .....
Levens Mfg. Co. .....
Linck, O. E., Co., Inc. .....
Lilly, Eli, & Co. 67
Lima Armature Works .....
Limestone Products Corp. of America 74
Loncala Phosphate Co. .....
Longhorn Eng. Co. .....

M-G-R Feed Co., Inc. .....
McCabe Grain Co., Ltd. .. 84
McKesson & Robbins, Inc. ....
McMillen Feed Mills 39
Magnus, Mabee & Reynard ...
Maney Bros. Mill & Elev. Co. 4, 100
Marco Chemical Co. 16
Martenis, C. J., Grain Co... 30
Martin, Theo. W., & Son ...
Mayo Shell Corp. 85
Melos Mfg. Co. .....
Merchants Chemical Co., Inc.
Merck & Co., Inc. 45
Mid-Continent Grain Co. 61
Midland Western 99
Mid-West Business Exchange.. 94
Midwest Dried Milk Co. .....
Milbrew Co. .....
Mill & Elevator Co. .....
Miller Manufacturing Co. ...
Miller Publishing Co., The ...
Milligan & Son .....
Minneapolis Sewing Mach. Co.
Minnesota Linseed Oil Co.... 72
Minnesota Specialty Co., Inc.
Monsanto Chemical Co. .....
Mooers Mfg. Co. .....
Morton Salt Co. 65
Munson Mill Machinery Co. ..
Murphy Products Co. .....
Myers-Sherman Company .....

Nagel, Herman, Co. 76
Natl. Alfalfa Dehydrating & Mlg. Co. .....
Natl. Cottonseed Prod. Assn., Inc. .....
Natl. Distillers Prod. Co. 30
Natl. Molasses Co. 15
National Oats Co. .....
National Renderers Assn. 33
National Turkey Federation Underwriters .....
National Vitamin Products Co.
Nellis Feed Co. 48
New Century Co., The .....
New England By-Prod. Co. 66
Nichols, Incorporated .....
Nitrogen Div., Allied Chem. & Dye Corp. .....
Nootbaar, H. V., & Co. ...
Nopco Chemical Co. 85
North American Dodgen Co... 62
North American Trading & Import Co. 24
North Carolina Granite Corp. 61
North East Feed Mill Co. 84
Northwest Brewers Yeast, Inc.
Nutrena Mills, Inc. 27, 100

Oakes Mfg. Co. .....
Olavarria & Co., Inc. 10
Olson Mill & Elevator .....
Omega Machine Co., Div. of B-I-F Industries, Inc. ...
Oyster Shell Corp. 64
Oyster Shell Prod. Corp. 38

Pabst Brewing Co. .....
Pacific Processing Corp. ....
Panogen, Inc. .....
Paper-Calmenson & Co. 86
Park, Philip R., Inc. .....
Parks, J. P., Co. 7
Parrish & Heimbecker 50
Parrish, N. K. .....
Paxton Processing Co., Inc... 95
Pay Way Feed Mills, Inc. ....
Peavey, F. H., & Co. 70
Peerless Equip. Co., Inc. ...
Penick, S. B., & Co. .....
Pfizer, Chas., & Co. 34, 35
Phelps Dodge Refining Corp..
Pillsbury Mills, Inc. .....
Pittsburgh Plate Glass Co. ..
Pless & Sheahan .....
Prater Pulverizer Co. 64
Pratt Bros. Co. 99
Pratt Labs., Inc. .....
Premier Peat Moss Corp. ....
Productive Acres Mfg. Co...
Progress Products Co., Inc...
Publicker Industries, Inc. 93

Quaker Oats Co. .....

Ralston Purina Co. .....
Rapids Machinery Co. 74
Raymond Bag Corporation ..
Read, Gladwin A., Co. .....
Red River Alfalfa Co. .....
Red Star Yeast & Prod. Co...
Regniers, Emile, Co. (U.S.A.), Inc. .....

Reliance Feed Co. .....
Rhinehart Co. .....
Rhodia, Inc. .....
Richardson, James, & Sons.. 36
Richardson Scale Co. .....
Riley Feed Co. .....
Rion Crush Stone Corp. 86
River Rest Turkey Sales, Inc..
Rohloff Bros., Inc. 61
Roskamp Huller Mfg. Co., Inc.
Rosner-Hixson Laboratories .. 52
Ross Machine & Mill Supply ..
Ryde & Co. 57

Safety Industries, Inc. .....
St. Regis Paper Co. .....
Salsbury's, Dr., Labs. 20, 21
Save-Way Feed Mills .....
Scanlan, Ivan, & Co. .....
Schenley Distillers, Inc. ....
Schroeder Sales Co. .....
Schuster-Wise Gr. & Feed Co.
Schutte Pulverizer Co., Inc...
Scroggins Grain Co. 68
Seagram, Joseph E., & Sons, Inc. 49
Seco, Inc. .....
Sedberry, J. B., Inc. 16
Seedburo Equipment Co. 84
Sheahan, Robert F. .....
Shellbuilder Co. 75
Shell Chemical Co. .....
Shuford, J. C., Co. .....
Sievert, C. W., & Associates
Simonsen Mfg. Co. .....
Sioux Products Co. .....
Small, The W. J., Co. .....
Smith, Edward E., & Co. ....
Soft Phosphate Research Inst. 63
Southwest Mill Supply Co. ..
Sparks-Waters Farnen, Inc. ..
Spencer Products, Inc. .....
Specifide, Inc. 91
Spencer Kellogg & Sons, Inc..
Sprout, Waldron & Co., Inc. 24, 38, 52, 59, 72, 89
Squibb, E. R., & Sons.....28, 29
Stabilized Vitamins, Inc. ....
Staley, A. E., Mfg. Co. ....
Staley Milling Co. .....
Standard Brands, Inc. ..38, 52, 68
Standard Feed & Fert., Inc... 83
Stauffer Chemical Co. .....
Stephens-Adamson Mfg. Co...
Sterwin Chemicals, Inc. 73
Stone Mountain Grit Co. ....
Strong-Scott Mfg. Co. 79
Sunset Feed & Grain Co. .. 79
Superior Feed Co. .....
Swanson, Carroll, Sales Co... 75
Swift & Co. .....
Syntha Lab. .....

T. D. F. Company .....
Tamms Industries .....
Taste Engineering, Inc. .....
Texas Mill Equipment Co....
Thayer Scale & Eng. Corp...
Thomer Equipment Co. .....
Thompson Printing Co. 58
Ti-Co Industries 99
Tobias Enterprises 31
Toxite Laboratories 80
Truck Grain Blower Co. .....

Ultra-Life Laboratories, Inc... 63
Union Bag-Camp Paper Corp.
Union Special Machine Co. ..
U. S. Industrial Chem. Co. .. 87
Universal Hoist Co. .....
Upjohn Company, The .....

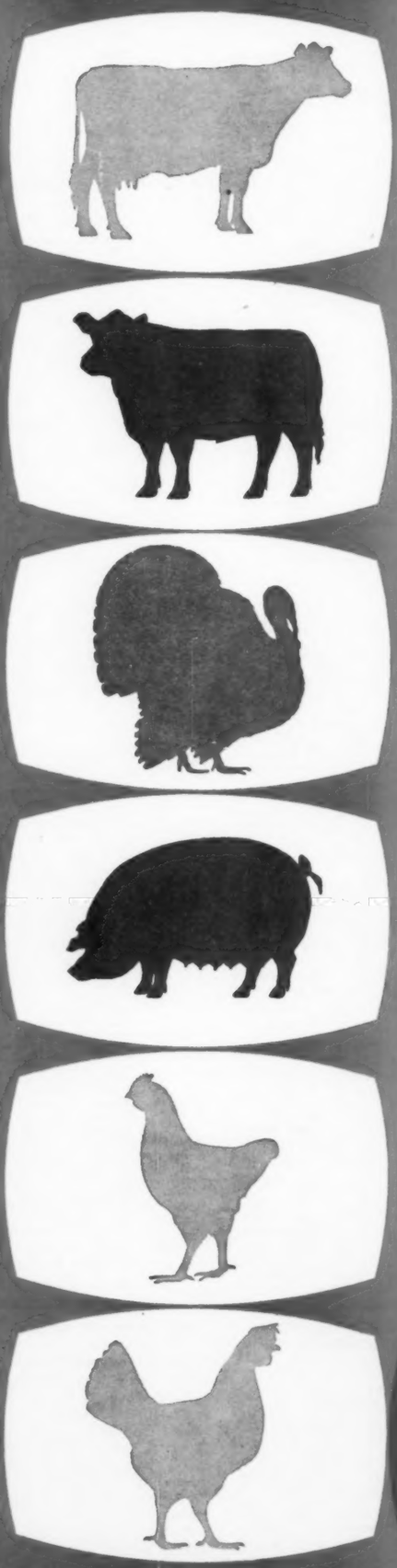
Van Dusen Harrington Co. .. 70
Vantress, Chas., Farms, Inc...
Van Waters & Rogers, Inc...
Vineland Laboratories, Inc. ..
Vitamins, Inc. 11
Vita-Vex, Inc. .....
Vitran Corp. .....
Vy Lactos Laboratories, Inc...

W-W Grinder Corporation .. 60
Wallace & Tiernan Inc. 83
Walsh Grain Co. .....
Warren-Douglas Chemical Co.
Weller, B. I., Co. .....
Wells, Ralph, & Co. .....
Wenger Mixer Mfg. Co. 68
Wertz Feed Co. .....
Western Condensing Co. ....
Western Yeast Co. .....
White Laboratories, Inc. .....
White Shell Corp. 83
Whitmoyer Laboratories, Inc.. 82
Wilhoit Laboratory .....
Wilson & Co., Inc. 58
Wilson, R. S., Co. .....
Wirthmore Feeds 80
Wisconsin Alumni Research Foundation .....
Woodward & Dickerson, Inc... 62

Young, John F., Co. 88
Youngiove Construction Co... 70

Zellers' Laboratories 66

In DAWE'S Vitamelk Programs



dependability makes the difference

Program your feed business the Vitamelk way. Dawe's Vitamelk program represents far more than fortification products. It is a way of doing business on the basis of having a nutritional laboratory affiliation. Dawe's dependable professional services will provide you sound counsel and relieve you of many of the details of managing a successful feed business. You will have added assurance that you are supplying your customers top-quality feeds.

This Is the Vitamelk Program

1. **VITAMELK**—a comprehensive vitamin, trace mineral, antibiotic and unidentified factors fortifier. *Full* fortification in one package.
2. **COMPLETE FORMULATIONS** for farm-tested feeds.
3. **TAG INFORMATION** for today's complicated feed tag requirements.
4. **COMPLETE FEEDER INSTRUCTIONS** on how to use Vitamelk-fortified feeds to best take advantage of their great built-in power.
5. **DAWE'S QUALITY CONTROL** laboratories are a remarkable help in solving special problems.
6. **MERCHANDISING** and sales counsel.
7. **CONTINUING RESPONSIBILITY** for applying the latest nutritional knowledge to your feeds.

Dawe's specialized nutrition, manufacturing and merchandising know-how is yours—yet you pay for Vitamelk only—when you program your business the Vitamelk way. Write for specific information on complete programs for poultry, swine, beef and dairy cattle.

FOREIGN OFFICES:

Belgium—13 Courte rue des Claires, Antwerp
Italy—Corso Magenta 81/83, Milan
Mexico—Sierra Leona 755, Mexico 10, D. F.
Venezuela—Apartado 3050, Caracas

Dawe's

World's Oldest and Largest Specialists in Vitamin Products for Feeds

DAWE'S LABORATORIES, INC.—4800 South Richmond Street, Chicago 32, Illinois